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A General Natural History: Or, New and Accurate Descriptions Of The Animals, Vegetables, and Minerals, Of the Different Parts of the World With Their Virtues and Uses, as far as hitherto certainly known, in Medicine and Mechanics: Illustrated By a General Review of the Knowledge of the Ancients, and the Discoveries and Improvements of later Ages in these Studies ; Including The History of the Materia Medica, Pictoria, and
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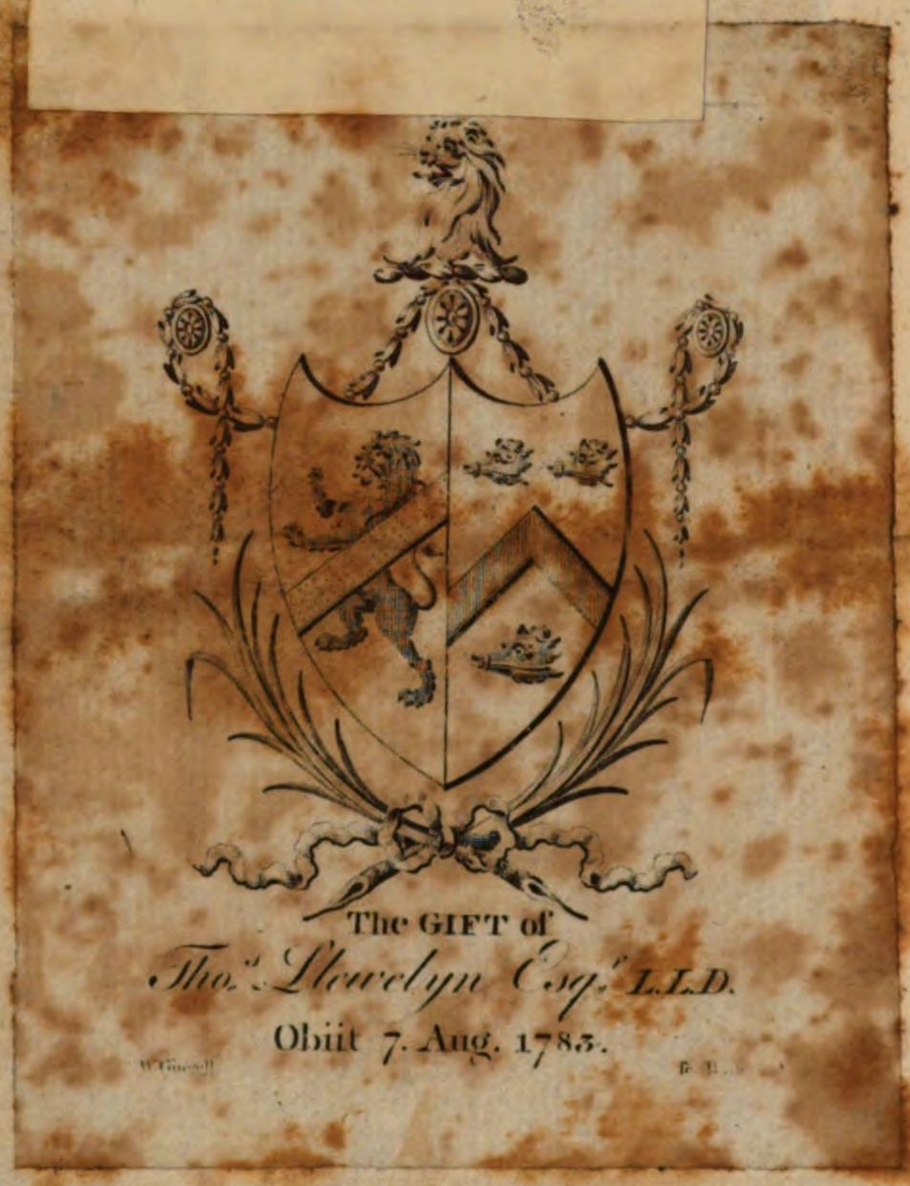

The GIFT of
Tho.s Llewelyn Esq.r LL.D.
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A

HISTORY

OF

PLANTS.

By JOHN HILL, M.D.

Acad. Reg. Scient. Burdig. &c. Soc.

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OR,

NEW and ACCURATE

DESCRIPTIONS

OF THE

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Of the DIFFERENT

PARTS of the WORLD;

WITH

Their VIRTUES, and USES as far as hitherto certainly known, in MEDICINE and MECHANICS:

ILLUSTRATED

By a GENERAL REVIEW of the Knowledge of the Ancients, and the Improvements and Diſcoveries of later Ages in theſe Studies.

INCLUDING

The HISTORY of the *MATERIA MEDICA, PICTORIA,* and *TINCTORIA* of the Preſent and Earlier AGES.

AS ALSO

OBSERVATIONS on the neglected Properties of many valuable Subſtances known at preſent; and Attempts to diſcover the loſt Medicines, *&c.* of former Ages, in a Series of Critical Enquiries into the *MATERIA MEDICA* of the Ancient GREEKS.

WITH

A great Number of FIGURES, elegantly Engraved.

By JOHN HILL, M.D.

Acad. Reg. Scient. Burdig. &c. Soc.

LONDON:

Printed for THOMAS OSBORNE, in Gray's-Inn, Holbourn.

MDCCLI.

R.B. a.5

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CONTENTS of the VOLUMES.

VOL. I. The History of FOSSILS.

VOL. II. The History of PLANTS.

VOL. III. The History of ANIMALS.

Each being in itself a compleat History of one of the Three great Classes of Natural Bodies.

Bayerische Staatsbibliothek München

THE PREFACE.

THE former volume of this Work, containing the Hiſtory of Foſſils, has fallen under the cenſure of ſome people, who have had leſs acquaintance with the learned languages, than ſeems neceſſary to the reading on any of the improved Sciences, on account of the many new generical terms contained in it, and formed out of the Greek: others have alſo objected to it, as too much out of the uſual manner of writing on the ſubject; too unlike all the other treatiſes on the mineral or foſſile kingdom.

I could wiſh to make a work of this kind of general uſe, and to obviate, as much as poſſible, even injudicious or unfair objections. What I have to plead, in juſtification of the former volume, is ſhort: That all new ſyſtems muſt have the aſſiſtance of new words; that not only reaſon, but cuſtom, time immemorial, has eſtabliſhed it as a law, that theſe are to be derived from the Greek; and that no author had written what could be called a Hiſtory of Foſſils before.

In regard to the ſubject of this volume, it is much otherwiſe: Botany has been, in a great meaſure, reduced into a ſyſtem already by Linnæus; and generical names are eſtabliſhed, in the greater part of it, expreſſive of the neceſſary diſtinctions. In the diſtributions and characters of what are called the imperfect plants, Linnæus, and indeed all who have written on the ſubject, appear to me to be greatly defective: ſo much of this Work, therefore, as regards theſe, will, I am afraid, be liable to the ſame objections with the former volumes; but in all the reſt I have everywhere retained the already eſtabliſhed names; I have kept up to the arrangement of the plants in the Linnæan ſyſtem, the author of which deſerves infinite praiſe; and have preſerved his claſſical as well as his generical names, his claſſical characters, and, ſo far as nature warrants it, have kept up to even his very terms in the generical diſtinctions. I have always, where it has been poſſible, examined the plants themſelves, in the time of their flowering: where they have agreed with his characters, I have never failed to adopt them; and, even where they have differed from his deſcriptions, I have given the account, in terms as like his own as might be.

Where ſome of his generical characters have contradicted a part of the claſſical ones, I have reconciled them; and, where ſome new diſcovered, or before not accurately examined, ſpecies has deviated from a part of the eſtabliſhed diſtinction of the genus, I have made no ſcruple of making that conform to nature. Of this kind will be found all the variations made, in this Work, from that excellent Writer's method; for the reſt, every one who underſtands him, or any of the botaniſts of reputation, who have written ſince the eſtabliſhment of his method, will meet with no difficulties in this point.

This, however, regards only the more abſtruſe and dry part of the Work: the deſcriptions of plants, which are all the generality of the world regards, have never fallen in his way.

The difficulty of compriſing a General Hiſtory of Plants, in the compaſs of ſo ſmall a volume as this was engaged to be, muſt have appeared very great to every one, who is at all acquainted with the nature of the ſubject. The method by which it has been executed is no other, than the cautious avoiding of repetitions, and the neceſſary reduction of the ſuppoſed number of ſpecies.

As to the firſt article, the claſſical and generical characters of a plant are always underſtood to make a part of the deſcription of the ſpecies; and theſe are ſo conſiderable a part, that little more is in reality neceſſary to be added to them, than the ſize of the plant, and of it's ſeveral parts; the form of the leaves, and the colour of the flowers. After ſuccinct deſcriptions of this kind, of three or four ſpecies of each genus, and thoſe as diſtinct and different in their general form as could be choſen, the others can hardly be miſtaken on a bare recital of their names, which always convey their principal, or more obvious, diſtinctions. I could have wiſhed to have made the names, under which I have mentioned theſe legitimately ſpecific ones, as has been done in regard to thoſe which are deſcribed, and where a ſynonymon of another author is given; but, where one name only could be given, it was neceſſary to give that by which the plant is now known in our own fields or gardens.

The number of plants, as they ſtand in the generality of authors, is not leſs than ſixteen thouſand; but this has been, in great part, owing to the common error of miſtaking varieties for ſpecies: I have, by ſeparating theſe, ſo far as I could with any degree of certainty, reduced the number of known plants to little more than eleven thouſand; and I am well aſſured, that future obſervation will yet very conſiderably leſſen that number.

I have ſuppoſed the reader leſs acquainted with botany at his firſt entering on this work, and have therefore been more large and expreſs, both in the characters and deſcriptions of the ſubjects; as he becomes more accuſtomed

cuſtomed to the terms, and familiariſed to the diſtinctions of plants, he will find the characters more ſuccinct, and the deſcriptions ſhorter.

The plates, though of a very limited number, will be found to contain every thing neceſſary to the underſtanding botany, as a ſcience: the three or four firſt explain to the eye all the terms uſed in the courſe of the Work; and in the others there will be found one plant of every claſs, and a number of the flowers of the more ſingular among the other genera compriſed under it. The deſcriptions are to be brought in to the aſſiſtance of theſe, as the characters are to that of the deſcriptions; and in this method, every part of the Work being ſubſervient to every other part of it, I am not afraid to aſſert, that it will ſo far anſwer it's purpoſed end, that a man of judgment, who has not ſtudied botany before, will, by means of it alone, without the aſſiſtance of any other work, be able to find the claſs, genus, and ſpecies of any plant he meets with in a perfect ſtate, and to call it by it's proper name.

Leſs than this I ſhould be ſorry to have arrived at; more I would not be ambitious of doing, in a volume of this ſize.

cuſtomed to the terms, and familiarized to the diſtinctions of plants, he will find the characters more ſucinct, and the deſcriptions ſhorter.

The plates, though of a very limited number, will be found to contain every thing neceſſary to the reader ſtudying botany, as a ſcience: the three or four firſt explain to the eye all the terms uſed in the courſe of the Work; and in the others there will be found one plant of every claſs, and a number of the flowers of the more ſingular among the other genera comprized under it. The deſcriptions are to be brought in to the aſſiſtance of theſe as the characters are to that of the deſcriptions; and in this method, every part of the Work being ſubſervient to every other part of it, I can not eaſily fail to offer, that it will ſo far explain it's purpoſed end, that a man of ſtudy-mate, who has not ſtudied botany before, will, by means of it alone, without the aſſiſtance of any other work, be able to find the claſs, genus, and ſpecies of any plant he meets with in a perfect ſtate, and to call it by it's proper name.

Let's then this I ſhould be ſorry to have arrived at; more I would not be ambitious of doing, in a volume of this ſize.

A GENERAL TABLE of BOTANY,

IN WHICH

All the GENERA are arranged under their Claſſes, Orders, and Diviſions, as they follow one another in this Hiſtory.

PART I.

OF thoſe uſually called imperfect plants.

BOOK I.

SUBMARINES.

1. *Thoſe which are of a ſtony hardneſs.*

Mycedium
Aſteræa
Madrepora
Eſchara
Tubularia
Acetabulum
Ormus
Corallum
Corallina
Alcyonium.

2. *Thoſe of a firm, tough, and elaſtic texture.*

Campylium
Spongia
Fucus
Strongylium.

3. *Of a tender, herbaceous ſtructure.*

Alga.

BOOK II.

FUNGI.

1. *Thoſe which grow horizontally.*

Agaricus
Poria
Odontia
Amphitretia.

2. *Thoſe which grow erect, and have heads.*

Lepiota
Solenia
Porium
Acontia
Leotia
Dictyaria.

3. *Thoſe which grow erect, and have no heads.*

Clethria
Arcyria
Lycoperdon
Carpobolus
Cyathia
Encælia
Clavaria
Meriſma
Xylaria
Acidium
Ceratoſpermum
Iſaria
Phyſarum
Monilia.

4. *Thoſe which grow under the ſurface of the earth.*

Tuber.

BOOK III.

MOSSES.

1. *Thoſe which conſiſt of tender filaments.*

Byſſus
Conferva.

2. *Thoſe which are of a foliaceous, or a gelatinous matter.*

Phyllona
Ulva
Collema.

3. *Thoſe conſiſting of firm or rigid ſtalks.*

Uſnea
Platyſma
Cladonia
Pyxidium.

4. *Thoſe conſiſting of a cruſtaceous, dry, or gelatinous matter.*

Placodium.

5. *Thoſe which produce capſules covered with opercula.*

Bryum
Polytrichum
Sphagnum
Mnium
Fontinalis
Hypnum.

6. *Thoſe which produce capſules without calyptræ,*

Lycopodium
Triſpermium.
Selago
Polycocca.
Opeca.

PART II.

Plants approaching to what are called the more perfect ones, but with ſcarce diſtinguiſhable fructifications.

CRYPTOGAMIA.

Salvinia
Lemna
Chara
Equiſetum
Ficus
Ophiogloſſum
Oſmunda
Pteris
Lonchitis
Adiantum
Aſplenium
Hernionitis
Polypodium
Trichomanes.

PART

PART III.

Plants called the more perfect ones.

MONANDRIA.

1. *Such as have only one style.*

1. *Those which have trilocular fruits.*

Canna
Amomum
Coſtus
Alpinia
Maranta
Curcuma
Kæmpferia.

2. *Those which have ſingle ſeeds.*

Boerhaavia
Hippuris
Salicornia.

3. *Such as have two ſtyles.*

Coriſpermum
Callitriche
Blitum.

DIANDRIA.

1. *Such as have only a ſingle ſtyle.*

1. *Those with regular corollæ.*

Nyctanthes
Jaſminum
Liguſtrum
Phyllerea
Olea
Chionanthus
Syringa
Eranthemum
Circæa.

2. *Those with irregular corollæ, and the ſeeds in capſules.*

Veronica
Pæderota
Juſticia
Gratiola
Pinguicula
Utricularia.

3. *Those with irregular corollæ, and naked ſeeds.*

Verbena
Lycopus
Amethyſtea
Ziziphora
Dianthera
Salvia
Roſmarinus
Monarda
Collinſonia
Morina.

2. *Such as have two ſtyles.*

Buffonia
Anthoxanthum.

3. *Such as have three ſtyles.*

Piper.

TRIANDRIA.

1. *Such as have only one ſtyle.*

1. *Those whoſe flowers have no amentum or ſpatha.*

Valeriana
Cneorum
Hirtella
Olax
Tamarindus.
Melothria
Polycnemum.

2. *Those with ſpathaceous flowers, and trilocular capſules.*

Crocus
Ixia
Gladiolus
Antholyza
Iris
Commelina
Xyris.

3. *Those with an imbricated amentum, and naked ſeeds.*

Schœnus
Cyperus
Scirpus
Eriophorum.

2. *Such as have two ſtyles.*

1. *Those with uniflorous cups.*

Bobartia

Cornucopiæ
Nardus
Saccharum
Phalaris
Phleum
Alopecurus
Panicum
Milium
Agroſtis
Lagurus
Dactylis.

2. *Those with multiflorous Cups.*

Melica
Aira
Poa
Briza
Uniola
Cynoſurus
Bromus
Feſtuca
Avena
Arundo
Lolium
Triticum
Secale
Hordeum
Elymus.

3. *Such as have three ſtyles.*

Eriocaulon
Proſerpinaca
Montia
Alſine
Tillæa
Mollugo.

TETRANDRIA.

1. *Such as have only one ſtyle.*

1. *Those with many flowers in a common calyx, and the ſeeds naked and ſingle.*

Leucodendron
Protea
Cephalanthus
Globularia
Dipſacus
Scabioſa
Knautia.

2. *Those with monopetalous flowers, on a didymous fruit, the ſtyle bifid.*

Aſperula
Sherardia
Spermacoce

Spermacoce
Hedyotis
Knoxia
Diodia
Crucianella
Houſtonia
Gallium
Rubia.

3. *Thoſe with monopetalous flowers, not diſtinguiſhed by the peculiar characters of the former.*

Siphonanthus
Cateſbæa
Ixora
Pavetta
Avicennia
Callicarpa
Penæa
Blæria
Polypremum
Exacum
Buddlæa
Plantago
Scoparia
Centunculus
Sanguiſorba
Ciſſus.

4. *Thoſe with complete tetrapetalous corollæ.*

Epimedium
Cornus
Enonymus
Tomex
Ptelea
Ludwigia
Oldenlandia
Ammania
Trapa.

5. *Thoſe with incomplete tetrapetalous corollæ.*

Dorſtenia
Iſnarda
Elæagnus
Brabejum
Camphoroſma
Rivina
Alchemilla.

2. *Such as have two ſtyles.*

Aphanes
Hamamelis
Cuſcuta
Hypecoum.

3. *Such as have four ſtyles.*

Ilex
Ruppia
Potamogeton
Sagina
Coldenia.

PENTANDRIA.

1. *Such as have only one ſtyle.*

1. *Thoſe with monopetalous flowers, ſucceeded by four naked ſeeds.*

Heliotropium
Myoſotis
Lithoſpermum
Anchuſa
Cynogloſſum
Symphytum
Pulmonaria
Borrago
Lycopſis
Echium
Aſperugo
Cerinthe
Tournefortia.

2. *Thoſe with monopetalous flowers, and capſules within them.*

Androſace
Primula
Cortuſa
Cyclamen
Soldanella
Menyanthes
Hottonia
Lyſimachia
Anagallis
Diapenſia
Hydrophyllum
Theophraſta
Patagonula
Spigelia
Azalea
Ophiorrhiza
Plumbago
Phlox
Convolvulus
Ipomœa
Polymonium.

3. *Thoſe with monopetalous flowers, and the germen ſituate underneath them.*

Campanula
Roella
Phyteuma
Trachelium
Samolus
Rondeletia
Chomelia
Bellonia
Genipa
Cinchona
Coffea
Morinda
Conocarpus
Diervilla
Lonicera
Muſſanda.

4. *Thoſe with declinated ſtamina.*

Mirabilis
Datura
Hyoſcyamus
Nicotiana
Atropa
Mandragora
Verbaſcum
Coris.

5. *Thoſe with a berry above the receptacle.*

Rhamnus
Chryſophyllum
Sideroxylum
Lycium
Ceſtrum
Philyca
Chironia
Brunfelſia
Myrſine
Strychnus
Capſicum
Solanum
Phyſalis.

6. *Thoſe with polypetalous flowers.*

Gronovia
Hedera
Vitis
Ribes
Cupanea
Itea
Celaſtrus
Ceanothus
Dioſma
Lagoecia
Brunia
Claytonia
Celoſia.

7. *Thoſe*

7. *Thoſe with incomplete flowers.*

Achyranthes
Theſium
Glaux
Illecebrum.

8. *Thoſe with the lobes of the corolla bent obliquely to the right.*

Cerbera
Rauvolfia
Thevetia
Vinca
Nerium
Plumeria
Cameraria
Tabernæmontana
Ceropegia.

2. *Such as have two ſtyles.*

1. *Thoſe with the lobes of the corolla bent obliquely to the right.*

Stapelia
Aſclepias
Periploca
Cynanchum
Apocynum.

2. *Thoſe with a ſingle ſeed after every flower.*

Herniaria
Salſola
Gomphrena
Chenopodium
Beta
Ulmus
Boſea
Caeſſa.

3. *Thoſe with numerous ſeeds.*

Nama
Mitreola
Huchera
Gentiana
Swertia.

4. *Thoſe with two naked ſeeds and a ſimple umbel.*

Phyllis
Panax
Eryngium
Hydrocotyle.

5. *Thoſe with two naked ſeeds and an univerſal and partial involucrum.*

Sanicula
Aſtrantia
Bupleurum
Echinophora
Tordylium
Caucalis
Artedia
Daucus
Ammi
Bunium
Conium
Selinum
Athamanta
Peucedanum
Crithmum
Cachrys
Ferula
Laſerpitium
Heracleum
Liguſticum
Angelica
Sium
Bubon
Cyminum
Siſon
OEnanthe.

6. *Thoſe with two naked ſeeds, and only a partial involucrum.*

Phellandrium
Cicuta
Ethuſa
Coriandrum
Scandix
Cherophyllum
Seſeli
Imperatoria.

7. *Thoſe with two naked ſeeds and no involucrum.*

Thapſia
Paſtinacha
Smyrnium
Anethum
Carum
Pimpinella
Aniſum
Apium
Ægopodium.

3. *Such as have three ſtyles.*

Rhus
Cotinus
Caffine
Maurocenia
Viburnum
Tinus
Opulus
Sambucus
Tamarix
Staphylæa
Turnera
Telephium
Corrigiola
Holoſteum
Baſella.

4. *Such as have four ſtyles.*

Parnaſſia.

5. *Such as have five ſtyles.*

Arabia
Barreria
Statice
Linum
Droſera
Craſſula
Suriana
Sibbaldia.

6. *Such as have numerous ſtyles.*

Myoſurus.

HEXANDRIA.

1. *Such as have only one ſtyle.*

1. *Thoſe with trifid, calyculate corollæ.*

Bromelia
Tillandſia
Renealmia
Burmannia
Tradeſcantia.

2. *Thoſe with monophyllous ſpathæ.*

Galanthus
Leucoium
Narciſſus
Pancratium
Amaryllis
Pontederia.

3. *Thoſe with naked, hexapetalous flowers.*

Crinum
Bulbocodium
Allium
Lilium
Fritillaria

Fritillaria
Tulipa
Erythronium
Uvularia
Gloriosa
Asphodelus
Anthericum
Scilla
Orinthogalum
Asparagus
Leontice.

4. *Those with naked, monopetalous flowers.*

Convallaria
Hyacynthus
Polyanthus
Aloe
Yucca
Agave
Hemerocallis.

5. *Those with cups to the flowers, but the corollæ not trifid.*

Acorus
Hæmanthus
Aphyllanthes
Flagellaria
Juncus
Richardia
Berberis
Cordia
Prinos
Loranthus
Peplis.

2. *Such as have two styles in the flower.*

Rumex
Scheukzeria
Triglochin
Colchicum
Melanthium
Medeola
Menispermum
Saururus.

3. *Such as have four styles.*

Petivera.

4. *Such as have numerous styles.*

Alisma.

HEPTANDRIA.

These have only one style.

Trientalis
Æsculus.

OCTANDRIA.

1. *Such as have only one style.*

Tropæolum
Acer
Dodonæa
Griselæa
Allophyllus
Jambolifera
Mimusops
Lawsonia
Rhexia
OEnothera
Epilobium
Erica
Daphne
Gnidia
Lachnæa
Passerina
Stellera
Santalum
Memecylum
Vaccinium
Diospyros.

2. *Such as have two styles.*

Moerhingia.
Chrysosplenium
Galenia.

3. *Such as have three styles.*

Polygonum
Persicaria
Bistorta
Helxine
Paulinia
Cardiospermum
Sapindus.

4. *Such as have four styles.*

Paris
Adoxa
Elatine.

5. *Such as have numerous styles.*

Michelia.

ENNEANDRIA.

1. *Such as have only one style.*

Laurus.

2. *Such as have three styles.*

Spondias
Rheum.

3. *Such as have six styles.*

Butomus.

DECANDRIA.

1. *Such as have only one style.*

1. *Those with declinated stamina.*

Sophora
Cercis
Bauhinia
Parkinsonia
Cassia
Poinciana
Cæsalpinia
Guilandina
Guaiacum
Cynometra
Anacardium
Dictamnus.

2. *Those with erect stamina.*

Toluifera
Monotropa
Zygophyllum
Adenanthera
Hæmatoxylum
Melia
Ruta
Fagonia
Tribulus
Jussiæa
Frankenia
Clethra
Pyrola
Andromeda
Arbutus
Ledum
Melastoma
Bartramia
Schinus.

2. *Such as have two styles.*

Dianthus
Saponaria
Scleranthus
Mitella
Saxifraga
Hydrangea
Royena.

3. *Such as have three styles.*

Malpighia
Bannisteria
Triopteris

Triopteris
Garidella
Cherleria
Drypis
Cucubalus
Silene
Stellularia
Arenaria.

4. *Such as have five ſtyles.*

Spergula
Ceraſtium
Agroſtemma
Coronaria
Lychnis
Averrhoa
Oxalis
Cotyledon
Sedum
Penthorum.

5. *Such as have ten ſtyles.*

Phytolacca
Neurada.

DODECANDRIA.

1. *Such as have only one ſtle.*

Gethyllis
Aſarum
Rhizophora
Lythrum.

2. *Such as have two ſtyles.*

Agrimonia.

3. *Such as have numerous ſtyles.*

Sempervivum.

ICOSANDRIA.

1. *Such as have only one ſtyle.*

Cactus
Philadelphus
Eugenia
Piſidium
Punica
Myrtus
Garcinia
Amygdalus
Prunus
Ceraſus
Padus
Styrax
Samyda

2. *Such as have two ſtyles.*

Cratægus.

3. *Such as have three ſtyles.*

Sorbus.

4. *Such as have four ſtyles.*

Tetragonia.

5. *Such as have five ſtyles.*

Aizoon
Meſembryanthemum
Meſpilus
Pyrus
Spiræa
Filipendula.

6. *Thoſe which have numerous ſtyles.*

Roſa
Rubus
Fragaria
Potentilla
Tormentilla
Comarum
Geum
Dryas.

POLYANDRIA.

1. *Such as have only one ſtyle.*

1. *Thoſe in which the ſtyle is ſcarce conſpicuous.*

Marcgravia
Moriſonia
Breynia
Cratæva
Capparis
Cambogia
Actæa
Bocconia
Chelidonium
Papaver
Argemone
Saracena
Cluſia
Muntingia
Sanguinaria
Podophyllum
Nymphæa.

2. *Thoſe which have the ſtyle elongated.*

Delima
Sloanea
Xylon

Mimoſa
Caryophyllus
Meſna
Mammea
Calophyllum
Euphorbia
Triumphetta
Peganum
Elæocarpus
Microcos
Mentzelia
Ochina
Ciſtus
Corchorus
Sauvagia
Tilia
Vateria
Chryſobalanus
Plinia
Portulaca
Anacampſeros
Thea
Bixa.

2. *Such as have two ſtyles.*

Heliocarpus
Pæonia
Caligonum.

3. *Such as have three ſtyles.*

Rheſida
Delphinium
Aconitum.

4. *Such as have four ſtyles.*

Tetracera.

5. *Such as have five ſtyles.*

Aquilegia
Nigella.

6. *Such as have ſix ſtyles.*

Stratiotes.

7. *Such as have numerous ſtyles.*

Dillenia
Liriodendrum
Magnolia
Uvaria
Anona
Hepatica
Pulſatilla
Anemone
Atragene
Clematis
Thalictrum

Adonis

Adonis
Ranunculus
Isopyrum
Helleborus
Caltha.

DIDYNAMIA.

1. *Such as have naked seeds.*

1. *Those with the calyx divided into five subequal segments.*

Teucrium
Satureia
Lavandula
Hyssopus
Nepeta
Botonica
Sideritis
Mentha
Glechoma
Orvala
Ajuga
Lamium
Galeopsis
Stachys
Ballota
Marrubium
Leonurus
Phlomis
Moluccella.

2. *Those with a bilabiated calyx.*

Ocymum
Trichostema
Thymus
Melissa
Clinopodium
Origanum
Dracocephalum
Horminum
Melittis
Cunila
Brunella
Scutellaria
Prasium.

2. *Such as have the seeds contained in capsules.*

1. *Those with the stigma simple, and the corolla personated.*

Bartsia
Rhinanthus
Euphrasia
Melampyrum
Lathræa
Phelypæa
Squammaria
Swalbea
Pedicularis
Tozzia
Chelone
Gesneria
Gerardia
Antirrhinum
Cymbaria.

2. *Those which have the stigma simple, and the corolla patulous.*

Linnæa
Craniolaria
Ægineta
Hebenstretia
Crescentia
Halleria
Lantana
Gmelina
Loeselia
Selago
Petræa
Celsia
Capraria
Digitalis
Bignonia
Citharexylon
Martinia
Scrophularia
Besleria
Cornutia
Browallia
Erinus
Buchnera
Limosella.

3. *Such as have the stigma double.*

Obolaria
Orobanche
Lippia
Mimulus
Bontia
Sesamum
Dodartia
Ruellia
Barleria
Ovieda
Columnea
Clerodendrum
Volkameria
Vitex
Acanthus.

4. *Those with polypetalous corollæ.*

Melianthus.

TETRADYNAMIA.

1. *Those with siliculose capsules.*

Myagrum
Anstatica
Subularia
Lepidum
Cochlearia
Thlaspi
Iberis
Biscutella
Clypeola
Alyssum
Lunaria
Draba
Vella.

2. *Those with siliquose capsules.*

Bunias
Cheiranthus
Hesperis
Raphanus
Dentaria
Cardamine
Brassica
Sinapis
Arabis
Erysimum
Turritis
Sisymbrium
Crambe
Isatis
Cleome.

MONADELPHIA.

1. *Such as have five stamina.*

Waltheria
Hermannia
Melochia.

2. *Such as have ten stamina.*

Hugonia
Connarus
Geranium.

3. *Such as have a great number of stamina.*

Pentapetes
Stewartia
Sida
Napæa
Lavatera
Malva
Gossypium
Malope
Urena

Urena
Alcea
Althæa
Hibiſcus
Trionum
Camellia.

DIADELPHIA.

1. *Such as have ſix ſtamina.*

Fumaria.

2. *Such as have eight ſtamina.*

Polygala
Heiſteria.

3. *Such as have ten ſtamina.*

1. *Thoſe with all the filaments connected at the baſe.*

Erythrina
Securidaca
Lupinus
Crotalaria
Geniſta
Spartium
Barbonia
Achyronia
Ononis
Galega
Anthyllis
Amorpha.

2. *Thoſe with pubeſcent ſtigmata.*

Anagyris
Robinia
Orobus
Lathyrus
Piſum
Vicia
Colutea
Dolichos
Phaſeolus.

3. *Thoſe with bilabiated calyces.*

Ulex
Cytiſus
Glycine
Arrhacis
Glycyrrhiza
Æſchinomone
Coronilla.

4. *Thoſe with the ſtigma ſimple.*

Cicer
Ervum
Aſtragalus
Biſerrula
Tragacantha
Phaca
Hedyſarum
Ornithopus
Scorpiurus
Hippocrepis
Medicago
Trigonella
Trifolium
Lotus
Dorycnium
Pſoralea
Clitoria
Indigofera
Dalea.

POLYADELPHIA.

1. *Such as have five ſtamina.*

Theobroma.

2. POLYADELPHIA ICOSANDRIA.

Citrus.

3. POLYADELPHIA POLYANDRIA.

Aſcyrum
Hypericum.

SYNGENESIA.

1. POLYGAMIA ÆQUALIS.

1. *Thoſe with planipetalous corollulæ.*

Tragopogon
Prenanthes
Chondrilla
Crepis
Hyoſeris
Lapſana
Lactuca
Hierachium
Picris
Scorzonera
Leontadon
Sonchus
Hypochæris
Catananche
Scolymus
Cichorium
Andryala
Elephantopus.

2. *Thoſe with tubipetalous corollulæ.*

Echinops
Gundelia
Arctium
Serratula
Onopordon
Carduus
Cinara
Carlina
Carthamus
Cnicus
Atractylis
Stœbe
Stœbelina
Bidens
Santolina
Tarchonanthus
Tanacetum
Ageratum
Chryſocoma
Kleinia
Eupatorium.

2. SYNGENESIA POLYGAMIA SUPERFLUA.

1. *Thoſe with floſculous flowers.*

Artemiſia
Gnaphalium
Xeranthemum
Carpeſium
Baccharis
Conyza.

2. *Thoſe with radiated flowers.*

Erigeron
Solidago
Aſter
Muſa
Senecio
Tuſſilago
Doronicum
Gerbera
Helenia
Tagetes
Cotula
Bellis
Chryſanthemum
Matricaria
Anthemis
Achillæa
Buphthalmum

Buphthalmum
Anacyclus
Verbesina
Sigesbeckia
Tetragonotheca
Tridax.

3. POLYGAMIA FRUSTRANEA.

Helianthus.
Rudbeckia
Coreopsis
Centaurea.

4. POLYGAMIA NECESSARIA.

Silphium
Chrysogonum
Melampodium
Micropus
Eriocephalus
Aretotis
Osteospermum
Calendula
Othonna
Sphæranthus
Milleria.

5. POLYGAMIA MONOGAMIA.

Corymbium
Jasione
Lobelia
Viola
Impatiens.

GYNANDRIA.

1. *Such as have two stamina.*

Orchis
Satyrium
Serapias
Herminium
Neotia
Ophris
Limodorum
Cypripedium
Epidendrum.

2. *Such as have three stamina.*

Sisyrinchium.

3. *Such as have four stamina.*

Nepenthes.

4. *Such as have five stamina.*

Passiflora.

5. *Such as have six stamina.*

Aristolochia
Pistia.

6. *Such as have ten stamina.*

Helicteres.

7. *Such as have numerous stamina.*

Grewia
Calla
Arum
Dracontium
Pothos
Zostera.

MONOECIA.

1. *Such as have only one stamen.*

Ceratocarpus
Zanichellia
Cynomorium.

2. *Such as have three stamina.*

Zea
Coix
Carex
Sparganium
Typha
Phyllanthus
Tragia
Axyris.

3. *Such as have four stamina.*

Urtica
Buxus
Alnus
Betula.

4. *Such as have five stamina.*

Xanthium
Ambrosia
Parthenium
Iva
Amaranthus.

4. *Such as have six stamina.*

Zizania.

5. *Such as have numerous stamina.*

Poterium
Sagittaria
Myriophyllum
Ceratophyllum
Quercus
Juglans
Fagus
Corylus
Carpinus
Platanus
Liquid Ambar.

2. MONOECIA MONADELPHIA.

Pinus
Abies
Cupressus
Thuya
Theligonum
Acalypha
Croton
Ricinus
Jatropha
Sterculia
Hura.

3. MONOECIA SYNGENESIA.

Trichosanthus
Momordica
Cucumis
Cucurbita
Sicyos
Bryonia
Trevilea.

4. MONOECIA GYNANDRIA.

Andrachne.

DIOECIA.

1. *Such as have only one stamen.*

Najas.

2. *Such as have two stamina.*

Vallisneria
Salix.

3. *Such*

3. *Such as have three ſtamina.*

Oſyris.

4. *Such as have four ſtamina.*

Viſcum
Hippophae
Myrica
Morus.

5. *Such as have five ſtamina.*

Antideſma
Piſonia
Piſtachia
Ceratonia
Spinachia
Cannabis
Humulus
Zanonia.

6. *Such as have ſix ſtamina.*

Glediſtia
Smilax
Tamus
Rajana
Dioſcorea.

7. *Such as have eight ſtamina.*

Populus.

8. *Such as have nine ſtamina.*

Mercurialis
Hydrocharis.

9. *Such as have ten ſtamina.*

Coriaria
Nyſſa
Carica
Kiggelaria
Datiſca.

10. DIOECIA ICOSANDRIA.

Aruncus.

11. DIOECIA POLYANDRIA.

Cliffortia.

12. DIOECIA MONADELPHIA.

Juniperus
Taxus
Ephedra.

13. DIOECIA SYNGESIA.

Ruſcus.

14. DIOECIA GYNANDRIA.

Clutia.

POLYGAMIA.

1. POLYGAMIA MONOECIA.

Muſa
Ophioxylum
Veratrum
Celtis
Holcus
Ægilops
Cenchrus
Valantia
Parietaria
Atriplex.

2. POLYGAMIA DIOECIA.

Chamærops
Fraxinus
Rhodiola
Anthoſpermum
Arctopus.

3. POLYGAMIA TRIOECIA.

Empetrum.

Explanation

Classical Characters of Plants.

Monandria

Diandria

Triandria

Tetrandria

Pentandria

Hexandria

Heptandria

Octandria

Enneandria

Decandria

Dodecandria

Icosandria

Polyandria

Didynamia

Tetradynamia

Monadelphia

Diadelphia

Polyadelphia

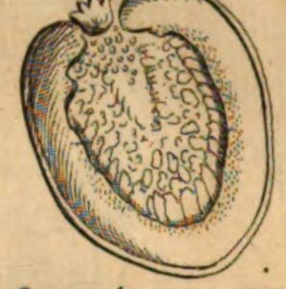
Syngenesia

Gynandria

Monœcia

Diœcia

Polygamia


Cryptogamia

Parts of Cups, Flowers, and Fruits.

Involucrum

Spathæ

Gluma

Amentum

Nectaria

Corollula tubulata

Petalum

Limbus

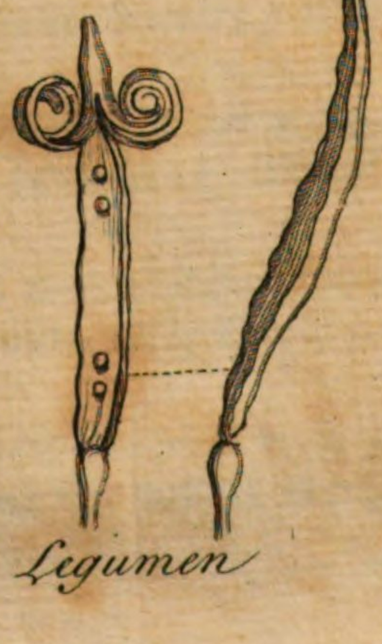
Tubus

Bractea

Nectarium

Unguis

Pericarpium


Legumen

Siliqua

Corollula ligulata

Pappous and Coronated Seeds

B. Cole Sculp.

Explanation *of the* TERMS *uſed in the* Deſcriptions *of the* Flowers *and* Fruits *of* Plants.

CALYX is a general term expreſſing the cup of a flower: the part of a plant which ſurrounds, incloſes, or ſupports the other parts of the flower.

The cups of flowers are very various in their ſtructure, and are diſtinguiſhed by the ſeveral names of, 1. Perianthium. 2. Involucrum. 3. Spatha. 4. Gluma.

1. *Perianthium* expreſſes that ſort of cup of a flower, which either conſiſts of ſeveral leaves, or elſe of one leaf divided into ſeveral ſegments, and ſurrounds the lower part of the flower.

2. *Involucrum* expreſſes that ſort of cup which ſurrounds a number of flowers together, every one of which has, beſide this general cup, it's own particular perianthium. The involucrum conſiſts of a multitude of little leaves, diſpoſed in a radiated manner.

3. *Spatha* expreſſes that ſort of cup which conſiſts of a ſimple membrane, growing from the ſtalk. This kind of cup is of various figures, often diphyllous, or divided into two parts; often ſimple, ſometimes more divided: it incloſes ſometimes a ſingle flower, ſometimes ſeveral together, and theſe have often no perianthium. The ſpatha is of very different texture and conſiſtence in different plants.

4. *Gluma.* The glume is a ſpecies of cup, conſiſting of two or three membranous valves, which are often pellucid at their edges. This kind of cup belongs to the graſſes.

The *Corolla* is the moſt conſpicuous part of a flower; it expreſſes the coloured, tender part which ſurrounds the organs of generation. The parts it is compoſed of are called *petals:* if it conſiſts only of one piece, it is called *monopetalous*; if of more, it is ſaid to be *dipetalous*, *tripetalous*, *tetrapetulous*, and ſo on, as it conſiſts of two, three, or four, or more parts.

Petal expreſſes the part of a flower which conſtitutes the corolla; this generally diſtinguiſhes itſelf by it's ſingular colour. When the corolla conſiſts of only one petal, it's lower tubular part is called the *tube*; it's upper expanded part, the *limb:* when ſeveral petals go to make up the flower, the narrow part, where they are inſerted, is called *unguis*; their broader part, toward the end, *bractea.*

Nectarium expreſſes what is ſometimes only a part of the corolla, ſometimes, though more rarely, the whole. It is a part deſtined for the reception of the honey juice of the plant, and is very various in it's figure. Sometimes it is only a hollow in a petal; ſometimes it is a little ſquamma, ſometimes a tubercle, and ſometimes a plain tube.

Corollula is uſed to expreſs thoſe little, partial flowers, which together conſtitute the whole of the compound ones. Theſe are of two kinds, the tubulatæ and ligulatæ: the tubulated corollulæ are always furniſhed with a campanulated limb, divided into four or five ſegments. The ligulated corollula has only a flat, linear limb, terminated by a ſingle point, or by a broader extremity, divided into three or five ſegments.

Stamina expreſſes the male organs of generation in flowers: theſe conſiſt of two parts, a filament and an anthera, though ſometimes the anthera ſtands alone.

The *Filament* is a ſlender body, ſupporting a tumid one, which is the anthera on it's head.

The *Anthera* is the principal male organ of generation; it is a ſmall tumid body, affixed on the top of the filament, and is hollow, and contains in it a fine powder, called the farina.

Piſtil expreſſes the female organ of generation in flowers; it is compoſed of three parts, the germen, the ſtyle, and the ſtigma.

The *Germen* expreſſes a part which ſupplies the office of an uterus in plants. It is of various ſhapes, but is always ſituated at the bottom of the piſtil, and contains the embryo ſeeds.

The *Style* is a part of various figure alſo, but it is always placed on the germen, and gives origin to the ſtyles; in ſome plants this is extreamly ſhort, in others it ſeems entirely wanting.

The *Stigma* is alſo of various figures; it's place, however, is certain: it ſtands on the top of the ſtyle, and, if there is no ſtyle, on the top of the germen.

Calyptra expreſſes a thin membranaceous involucrum, uſually of a conic figure, which covers the parts of fructification. The capſules of moſt of the moſſes have calyptræ.

Pericarpium expreſſes a covering or caſe made for the ſeeds of plants. It is the germen of the piſtil inlarged. There are no leſs than nine ſpecies of pericarpia. 1. A capſule. 2. A conceptaculum. 3. A pod. 4. A legumen. 5. A nut. 6. A drupe. 7. An apple. 8. A berry. 9. A ſtrobilus.

1. *Capſule* expreſſes a pericarpium, compoſed of ſeveral dry, elaſtic valves, which uſually burſt open at the points. This kind of pericarpium ſometimes contains only one cell or cavity, ſometimes more: in the firſt caſe, it is called unilocular; in the ſecond, bilocular trilocular or multilocular, according to the number of cells in it, made for the reception of the ſeeds.

2. *Conceptaculum.* This expreſſes a kind of pericarpium, compoſed of ſoft and leſs rigid valves, and containing only one cavity.

3. *Pod.* This term expreſſes a pericarpium, conſiſting of two valves, which open from the baſe to the point, and are ſeparated by a membranaceous partition, from which the ſeeds hang by a kind of funiculus umbilicalis.

4. *Legume* expreſſes a pericarpium of an oblong, compreſſed figure, formed of two valves, joined by a viſible ſuture, both on the upper and under parts, and having the ſeeds affixed to the upper limb of the two valves, in an alternate order.

5. *Nut.* This term expreſſes a pericarpium of an extraordinary hardneſs.

6. *Drupe.* This term expreſſes a pericarpium, conſiſting of a ſoft, fleſhy, and ſucculent pulp, in the center of which there is a nucleus.

7. *Apple.* By this term is expreſſed a pericarpium, conſiſting of a ſolid, fleſhy pulp, in the middle of which there are ſeeds incloſed in membranaceous coverings.

8. *Berry.* By this is expreſſed a fruit, containing a number of naked ſeeds, in the midſt of a ſucculent pulp.

9. *Strobilus* expreſſes a pericarpium, formed of a number of vaginæ, with contorted points applied cloſe to one another.

Receptaculum expreſſes that part of a plant, to which the flower or the fruit adheres; this is a part of a very various figure in the various genera.

Corona expreſſes any thing growing on the head of a ſeed. The coronæ of ſeeds are of various kinds; they are ſometimes ſimple, conſiſting only of a dentated membrane; ſometimes pappoſe, conſiſting of downy matter. The downy matter, in ſome caſes, is immediately affixed to the ſeed; in others it has a pedicle growing from it; and it ſometimes is compoſed of ſimple filaments, ſometimes it is ramoſe.

Amentum expreſſes what we generally call a *Catkin.* It is a cluſter of flowers only of one ſex affixed to an axis. In ſome caſes there are ſquammæ on the axis, which do the office of cups; in others, the flowers are naked.

Volva. A membranous matter, ſurrounding the baſes of many of the fungi, and in many of them of a very ſingular figure and ſtructure.

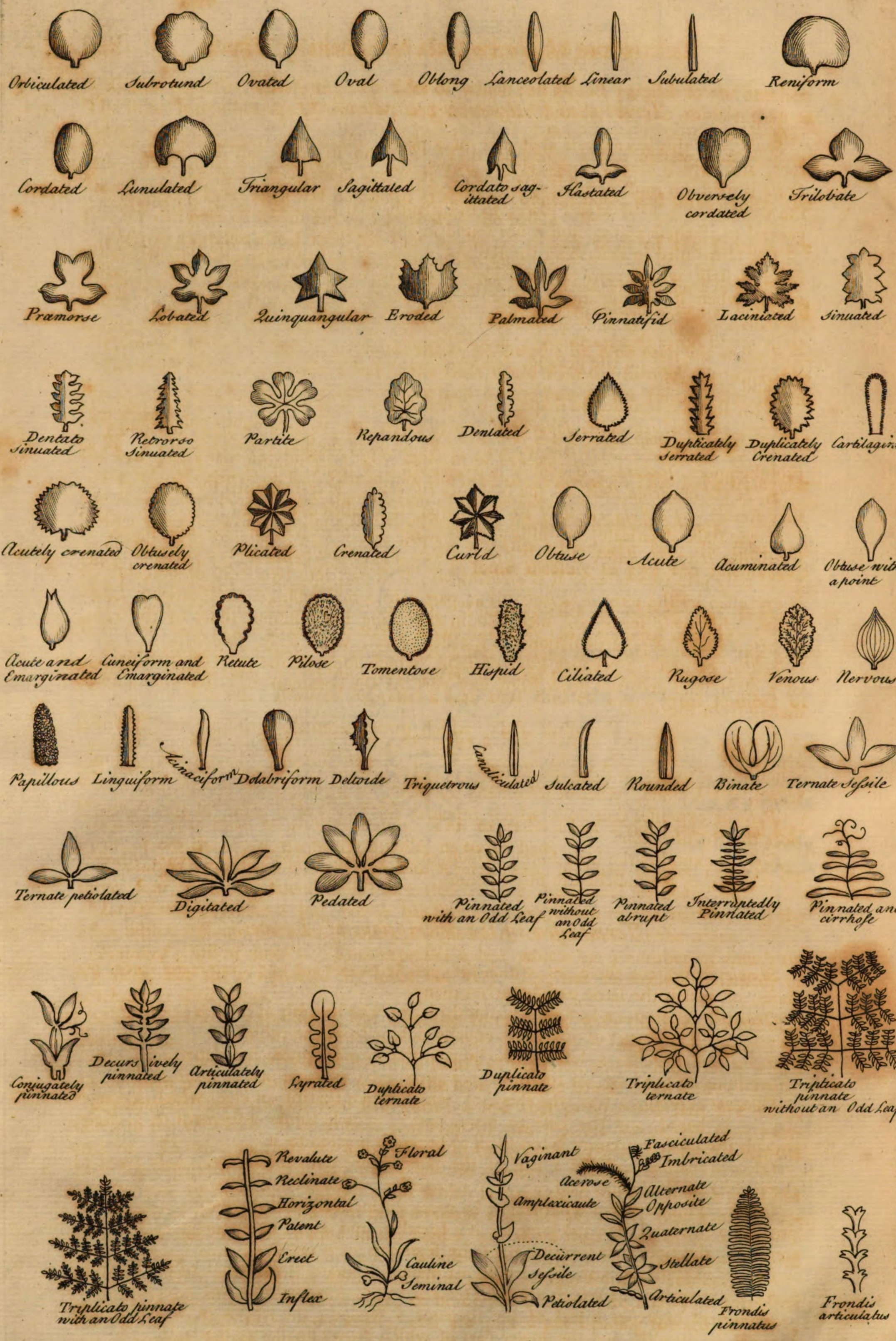
Terms uſed in the deſcription of Roots.

Bulbous expreſſes a root of a round, or roundiſh, figure, and uſually furniſhed with fibres at it's baſe. The terms uſed in deſcribing bulbous roots are, 1. *Solid,* which expreſſes the whole root to be one uniform lump of matter. 2. *Tunicated*; this expreſſes ſuch bulbs as are formed of multitudes of coats ſurrounding one another. 3. *Squammoſe,* expreſſing ſuch as are compoſed of, or covered with leſſer flakes. 4. *Duplicate,* expreſſing ſuch as are compoſed of two; and, 5. *Aggregate,* ſuch as are compoſed of ſeveral ſmaller roots.

Tuberous expreſſes a root large and fleſhy, thicker than the ſtalk of the plant, of an irregular figure, and wanting the characters of the *bulbous.* When the tuberous roots adhere immediately to the baſe of the ſtalk, they are called *ſeſſile*; when they are fixed to the ends of fibres, *pendulous.*

Fibrous expreſſes a root, conſiſting of one, or more, ſlender bodies, oblong, and leſs thick than the ſtalk of the plant. When a fibrous root penetrates ſtrait into the ground, it is called *perpendicular*; when it creeps under the ſurface, *horizontal*; when ſomewhat thick, it is called *fleſhy*; when very thin, *capillary*; when it runs all the way undivided, *ſimple*; when divided, or when it ſends off ſmaller roots, *branched*; when it's ſurface is covered with extreamly ſhort and fine fibres, *hairy.*

Leaves of Plants.



Distinctions of Leaves according to their Situations. &c.

B. Cole Sculp.

Terms uſed in deſcribing the Stalks of plants.

Stalk. By this we expreſs that part of a plant, which riſes immediately from the root, and which uſually ſupports the leaves, the flowers, and the fruit. The term *Stalk* is uſed, on moſt occaſions; but, in ſpeaking of the graſſes and gramineous plants, the word *culm* is uſed in it's place, to diſtinguiſh that peculiar kind of ſtalk which is general to all theſe plants, and is not found in any others.

The terms uſed in deſcribing the ſtalk of a plant are, 1. *Simple*; by this we underſtand a ſtalk which runs up undivided from the root to the top. This is called *naked*, when it has no leaves; when it has leaves on it, *folioſe*; when it ſends out branches, *ramoſe*. If it riſes ſtrait up, it is called *erect*; if ſlanting, *oblique*; if it twiſt round other things, *voluble*; if it bend, *flexuous*; if it ſtoops toward the ground, *reclinate*; if it lie on the ground, *procumbent*; if it emit roots, as it runs along, *creeping* and *ſarmentous*.

If the ſtalk be rounded in ſhape, it is called *round*; if it make two angles, *ancipital*; if three, *trigonal*; if four, *ſquare*; if more, *polygonal*; if it be lightly ridged and furrowed on the ſurface, it is ſaid to be *ſtriated*; if more deeply, *canaliculated*; if full of protuberances, *ſcabrous*; if lightly hairy, *villoſe*; if more roughly ſo, *hiſpid*.

2. *In the branched ſtalk*, if the branches riſe erect, it is expreſſed by *aſcendent*; if they ſpread, by *diffuſe*; if they are very large, it is called *brachiated*.

If the ſtalk divaricate, or, inſtead of ſending out branches, divides into them, it is called *a compoſite ſtalk*; if theſe divarications proceed by pairs, or every branch is divided only into two others, it is *dichotomous*; if it part into two ſeries of branches, it is expreſſed by the term *diſtichous*; if it part into a multitude of ramifications, *ſubdivided*. All theſe terms are uſed alſo in expreſſing the different ſtates of the *culm*. When a ſtalk has no articulations, it is called *equal*; when ſcaly, *ſquamoſe*.

Scapus expreſſes a peculiar kind of ſtalk, which ſupports the parts of fructification of a plant, and does not grow from any part of the common ſtalk, but riſes immediately from the root.

Peduncle expreſſes that little ſtalk, which grows from the trunk or branches of a plant, and ſupports the parts of fructification, the flower, and the fruit, or either: when this is produced from the ſtalk, it is called *caulinus*; when from the alæ of the leaves, *alaris*; and, when it terminates the plant, or it's branches, *terminalis*.

Petiolus expreſſes that ſtalk which ſupports the leaves of a plant, as the peduncle does the fructifications.

Cirrhus expreſſes the little fibres, which many plants ſend out from their ſtalks, and by which they are attached to other bodies.

Terms uſed in the deſcriptions of Leaves.

Simple leaves are thoſe, of which the petiole carries but one; *compound leaves* are thoſe, of which the ſame petiole carries many.

Orbicular expreſſes a leaf of a roundiſh figure, the breadth of which is equal to it's length, and every part of it's edges equally diſtant from the center.

Subrotund expreſſes a leaf approaching to the former figure, but departing from it, either in being too long, or too broad, or prominent in ſome one or more parts.

Ovatum expreſſes a leaf, the ſhape of which is like that of an egg, which is longer than it is broad, and the baſe or lower part of which forms a ſegment of a circle, though the other extremity is too ſmall to be in proportion to it.

Obverſe ovatum expreſſes a leaf of the ſame figure with the former, only fixed to the petiole by it's ſmaller end.

Oval. This expreſſes what might be more diſtinctively called *elliptic*; a figure approaching to round, but too long for it's breadth, and equal in diameter at both extremities, the two ends forming the ſame ſegments of a circle.

Oblong expreſſes a leaf, the length of which is many times equal to the breadth, and the extremities of which are both too narrow to form ſegments of circles.

Cuneiform expreſſes a leaf of the ſhape of a wedge; the length of which greatly exceeds the breadth, and the lower part of which grows ſmaller all the way.

Lanceolated expreſſes a leaf of the ſhape of a ſpear-point, that is oblong, and growing ſmaller and narrower, from the middle to the extremity, where it terminates in a point.

Linear expreſſes a leaf, the two ſides of which run almoſt parallel to one another. The linear leaves are uſually narrow, and ſomewhat broader in the middle than at either end.

Subulated, of the ſhape of an awl. This expreſſes a leaf oblong and narrow, broadeſt at the baſe, and thence gradually terminating in a point.

Triangular expreſſes a leaf compoſed of three rectilinear ſides, and three angles, the two inferior ones of which are on a level with the baſe.

Deltoide expreſſes a leaf that has four angles, of which thoſe of the ſummit are farther diſtant from the center than thoſe of the ſides.

Quinquangular expreſſes a leaf, the ſides of which are ſtrait, and make five angles.

Reniform, of the ſhape of a kidney. This is a leaf of a ſuborbicular figure, hollowed a little at the baſe, but that without any angle.

Cordated expreſſes a leaf of an ovated ſhape, hollowed a little on each ſide at the baſe.

Obverſely cordated expreſſes a leaf of the ſame figure with the former, but affixed to it's petiole, not by the cordated part, which is the baſe in the former, but by the oppoſite end.

Lunulated expreſſes a leaf in form of a creſcent: it is a ſuborbicular leaf, hollowed at the baſe, with two curvilinear angles, in form of ſickles.

Sagittated expreſſes a leaf formed like the head of an arrow. This is the triangular leaf hollowed at it's baſe, for the inſertion of the petiole.

Cordato-ſagittated expreſſes a ſagittated leaf, the ſides of which are convex.

Haſtated, in form of a ſpear-point. This expreſſes a triangular leaf, the ſides and the baſe of which are both hollowed, ſo as in ſome meaſure to give the reſemblance of a leaf compoſed of three parts.

Panduriforme; of the ſhape of a violin. This expreſſes an oblong leaf, larger at both ends than in the middle, where it is cut in deeply, in a rounded manner.

Bifid; divided into two. This expreſſes a leaf divided into two parts at the top. When a leaf is thus divided into three parts, it is ſaid to be *trifid*; when into four, *quadrifid*, and ſo on. *Multifid* expreſſes a leaf thus divided into a great number of ſegments.

Trilobous, divided into three lobes, expreſſes a leaf divided juſt down to the middle, into three parts, which ſtand ſeparate from one another, and are rounded at the edges. In the ſame manner, a leaf thus divided into four parts, is called *quadrilobous*; one into five, *quinquelobous*, and ſo on.

Palmated, in form of an open hand. This expreſſes a leaf divided into ſeveral ſegments, from the top down to the middle, or to the baſe.

Pinnatifid expreſſes a leaf divided into ſeveral parts, in form of alæ, or that has three, four, or more, lateral ſinus's ſeparated by long, horizontal ſegments.

Laciniated expreſſes a leaf which has ſeveral ſinus's down to the middle, and the lobes which ſeparate theſe not ſmooth, but notched, or indented, at the edges.

Sinuated; full of ſinus's. This expreſſes a leaf which has a number of ſinus's on it's ſides, but theſe ſeparated by lobes not very long, nor themſelves indented, or notched, at their edges.

Sinuato-dentated expreſſes a leaf like the former, but with the lateral lobes of a linear figure.

Retorſum ſinuatum expreſſes a leaf with ſinus's at the ſides, and with the lobes which divide them pointed, and turned toward the baſe, like the beards of an arrow.

Quinquepartitum, divided into five parts; a leaf that is ſeparated into five parts, down to the very baſe, ſo as to ſeem made up of five ſeparate leaves, till cloſely examined. In the ſame manner, a leaf is ſaid to be *bipartite*, *tripartite*, &c. when the parts it is ſeparated into are two, three, *&c.* in number.

Integrum, or *indiviſum*, expreſs a leaf which is intire, and not cut in with any ſinus in the diſk of the leaf. The term *integerrimum* expreſſes yet more, that it has no diviſion, or ſinuation, of any kind in the border, any more than in the diſk.

Dentatum, dentated, expreſſes a leaf whoſe edge is beſet with horizontal points, of the ſame matter with the leaf itſelf, and diſtinct and ſeparate from one another.

Serrated expreſſes a leaf whoſe edge, or border, is notched like a ſaw, or furniſhed with points, which make acute angles, and are placed one bending toward the other, and all toward the top.

Retrorſum ſerratum; a leaf whoſe edge is furniſhed with the ſame ſort of indentings, but in which they are turned backwards, or all look toward the baſe of the leaf.

Obſolete ſerratum expreſſes a leaf indentated in the ſame manner, but the indentings obtuſe and weak.

Duplicato-ſerratum expreſſes a leaf ſerrated as the firſt, but with the ſerratures large, and their edges ſerrated again, with indentings of the ſame kind.

Crenated expreſſes a leaf, the edges of which are furniſhed with indentings, which are contiguous to one another, and are neither turned toward the point, nor toward the baſe.

Acute crenatum; a crenated leaf, in which the indentings are ſharp at the ends.

Obtuſe crenatum; a crenated leaf, in which the indentings terminate obtuſely.

Repandum expreſſes a leaf, the border of which is marked all round with ſhort lobes, each making a ſegment of a circle, with obtuſe ſinus's.

Cartilaginous expreſſes a leaf, the edge of which is ſurrounded with a kind of cartilage, or border, thicker than the reſt, but of the ſubſtance of the leaf.

Ciliated expreſſes a leaf which is ſurrounded all the way with parallel hairs, or filaments, ſo as to give ſome reſemblance of the hairineſs of the eye-lids.

Lacerum expreſſes a leaf, the edge of which is compoſed of ſegments of a different ſhape and figure.

Criſpum, curled, expreſſes a leaf which is undulated, or folded over and over at the edge, which muſt alſo be in ſome manner divided, not entire, either dentated, ſerrated, or lacerated.

Eroſum expreſſes a leaf which has ſeveral ſinus's in it's diſk, and alſo in the edge, or border.

Tomentoſe expreſſes a leaf whoſe ſurface is covered with hairs ſo ſhort and fine, that the eye does not diſtinguiſh them ſingly, though the leaf in general is evidently downy, both to the ſight and the touch.

Piloſe expreſſes a leaf whoſe ſurface is furniſhed with hairs ſo large and long, as to be diſtinguiſhable by the eye ſeparately. The ſame idea is expreſſed alſo by the terms *hirſutum*, *villoſum*, and *lanigerum*.

Hiſpidum expreſſes a leaf whoſe ſurface is covered with more thick and rigid hairs.

Scabrous expreſſes a leaf the ſurface of which has on it ſeveral little, irregular prominences.

Aculeated expreſſes a leaf the ſurface of which is covered with cartilaginous points, ſharp, rigid, and ſtrong enough to wound any tender part of the fleſh, and which adhere but ſlightly to the leaf, and may be eaſily ſeparated from it.

Spinoſe expreſſes a leaf whoſe diſk, or edge, is armed with cartilaginous points, ſo firmly affixed, that they cannot be ſeparated, without injuring the leaf itſelf.

Papilloſe expreſſes a leaf the ſurface of which is covered with little, roundiſh protuberances, or veſicles.

Nitidum expreſſes a leaf of a ſmooth and gloſſy ſurface, looking as if poliſhed by art.

Plicated expreſſes a leaf, from the baſe, or petiole, of which there run, at ſeveral diſtances, veſſels, or fibres, which extend themſelves to the extreme ſides, and ſome of which raiſe, and others depreſs, the diſk of the leaf, in an alternate manner, making acute angles.

Undulated expreſſes a leaf, the exterior part of the diſk of which is of more extent than a circle of the ſame diameter, ſo that the edges are neceſſitated to riſe and fall in a regular manner.

Rugoſe expreſſes a leaf the veins of which are ſunk deep, and between which the membranous and fleſhy part of the leaf riſes in irregular forms, ſo as to give, upon the whole, a wrinkled ſurface.

Venoſum expreſſes a leaf on the ſurface of which there are a vaſt number of branched veſſels, which frequently unite, in an odd manner, one with another.

Nervoſum expreſſes a leaf the veſſels of which are ſimple, and extend themſelves parallely from the baſe toward the ſummit, without any ramifications.

Nudum expreſſes a leaf whoſe ſurface is ſmooth and equal, without any particular marks.

Truncated expreſſes a leaf the ſummit, or point, of which ſeems to have been cut off, or is terminated by a ſtrait line in a tranſverſe direction.

Retuſum expreſſes a leaf whoſe extremity is terminated by an obtuſe ſinus.

Præmorſum expreſſes a leaf which is truncated, and terminated by an acute ſinus at the ſummit.

Emarginatum expreſſes a leaf which has a little indenting on the ſummit.

Obtuſely

Obtuſely emarginated is the term uſed, when this indenting is terminated on each ſide by obtuſe points.

Acutely emarginated is uſed, when the points which form the indenting are acute.

Obtuſe expreſſes a leaf which is terminated by a ſegment of a circle.

Acute expreſſes a leaf which is terminated by a ſharp point.

Acuminated expreſſes a leaf terminated by a pointed and ſharp extremity, like an awl.

Obtuſum cum acumine expreſſes a leaf whoſe ſummit is obtuſe, but is terminated by a fine, ſharp point, affixed, as it were, upon it.

Teres expreſſes a leaf which is not flatted, as moſt are, but is of a cylindric figure, excepting the point.

Tubuloſe expreſſes a leaf which is hollow within, and makes a kind of tube.

Carnous, fleſhy; expreſſes a leaf which is full of pulp, or of a fleſhy ſubſtance, contained between the membranes which form the upper and under ſurface.

Membranaceous expreſſes a leaf merely compoſed of membranes, with no pulp between.

Depreſſed expreſſes a leaf which has the mark of an impreſſion on one ſide.

Compreſſed expreſſes a leaf which has the ſame kind of mark on both ſides.

Convex expreſſes a leaf whoſe middle riſes into a protuberant form.

Concave expreſſes a leaf whoſe middle is ſunk, or hollowed.

Canaliculated expreſſes a leaf which is hollowed all the way of it's length with a channel.

Enſiform, of the ſhape of a ſword, expreſſes a compreſſed leaf, which is thin, and edged, as it were, on the ſides, and which has a high rib running down it's middle.

Linguiform, in ſhape of a tongue, expreſſes a linear leaf, which is obtuſe, fleſhy, depreſſed, convex on the under ſide, and uſually cartilaginous at the edge.

Triquetrum expreſſes a leaf which has three faces, or ſides, all flat. This is uſually alſo ſubulated, or grows gradually ſmaller from the baſe to the point.

Trigonal expreſſes a leaf that is much like the triquetrous one, but in this the ſeveral faces are each hollowed in form of channels, and the ribs are ſharp and membranaceous. A leaf that has, inſtead of three ribs, or edges, four or five, is, in the ſame manner, called, *tetragonal*, or *pentagonal*, &c.

Sulcated expreſſes a leaf that has a number of ridges all round it, with obtuſe ſinus's.

Striated expreſſes a leaf that has a number of longitudinal furrows on it's ſurface.

Compound expreſſes, in general, a leaf which is formed of ſeveral other leſſer leaves. In this large ſenſe, however, it is diviſible into ſeveral kinds: 1. The compound ones properly and diſtinctly ſo called. 2. The decompound; and, 3. The ſupradecompound; of each of which in it's place. In deſcribing theſe kinds of leaves the whole leaf, which is the reſult of the combination, is called *folium*, and the ſmall leaves, which together compoſe it, are called *foliola*. A *compound leaf*, properly and diſtinctly ſo called, is only formed of one ſeries of foliola, or of one compoſition.

Digitated expreſſes a compound leaf, formed of a number of ſimple foliola, placed regularly on a common petiole: in a ſtrict ſenſe, however, it is uſed only to expreſs ſuch a leaf as is compoſed of more than four foliola.

Ternatum expreſſes a compound leaf, conſiſting of only three leaves on a common petiole.

Seſſile expreſſes a leaf affixed immediately to the ſtalk, or root, without any petiole.

Petiolate is the contrary of ſeſſile; it expreſſes a leaf affixed to a plant, by means of a peculiar pedicle, which pedicle, in caſe of a leaf, is called petiole, though, in caſe of fruit, a peduncle.

Binatum expreſſes a kind of compound leaf, formed only of two foliola on one petiole.

Ramuloſum expreſſes a leaf of the compound kind, in which there are ſeveral foliola, ſuſtained on a branched petiole.

Pinnated expreſſes a leaf formed in manner of a wing, and compoſed of two ranges, or ſeries, of foliola, annexed to the two ſides of one common, oblong petiole. Of the pinnated leaves, however, there are ſeveral kinds: 1. The *pinnated with an odd one*. This expreſſes the pinnated leaf, when, beſide the two ſeries juſt mentioned, there is an odd leaf at the extremity of the petiole. 2. The *pinnated abrupt leaf*. This expreſſes a pinnated leaf in which there is neither an odd leaf nor a tendril at the end of the petiole. 3. The *oppoſitely pinnated*; which is when the folioles ſtand oppoſite to one another on the common petiole. 4. The *alternately pinnate*; when the folioles ſtand not oppoſite, but alternately. 5. The *interruptedly pinnate*; in which the folioles are irregular and unequal in ſize or ſituation. 6. The *cirrhated-pinnate*, wherein the extremity of the petiole has one, or more, tendrils, inſtead of an odd leaf. 7. The *decurrently pinnate*; in which the folioles extend beyond their proper

baſe,

baſe in going down the petiole, and, as it were, make it alated. 8. The *membranaceous pinnated*, of the ſame form with the laſt, but with the petioles themſelves membranaceous and articulated. 9. The conjugated pinnated leaf, when the whole compound leaf conſiſts of only two folioles on the petiole: this kind of pinnated leaf may be either abrupt, cirrated, membranaceous in the petiole, or ſtipulated.

Lyratum, in form of a lyre, expreſſes a compound leaf, formed of a ſimple leaf, which divides itſelf in it's lower part, in ſuch a manner, that the inciſions below make ſegments, which ſtand out from the body of the leaf, and are detached from the larger ſegment, which forms the upper part.

Decompoſite expreſſes a leaf, the common petiole of which divides itſelf twice, before it is furniſhed with leaves.

Duplicato-ternatum expreſſes a leaf conſiſting of leaves which are themſelves compoſed of three leaves each.

Bigeminatum expreſſes a leaf formed of a double conjugation of leſſer leaves.

Duplicato-pinnatum, or *pinnato-pinnatum*, expreſſes a leaf compoſed of ſeveral others, each of which is itſelf compoſed of ſeveral ſmaller leaves or foliola.

Supradecompoſite expreſſes ſuch leaves as have the common petiole divided more than twice, before it is charged with leaves or foliola.

Triplicato-ternatum expreſſes a leaf, the petiole of which divides three times, or into three branches, before any leaves or foliola are placed on it.

Ternato-ternatum, the ſame with *triplicato-ternatum*.

Triplicato-pinnatum expreſſes a leaf, the petioles of which ſend out three alated ſubdiviſions, before it has any leaves on it. Theſe are terminated ſometimes by two foliola each, and in that caſe are ſaid to be abrupt; ſometimes by an odd leaf, and are then called *triplicato-pinnata cum impari*.

Inflexum expreſſes a leaf, which, in growing from it's baſe, turns it's point again toward the plant.

Erectum, *erect*, expreſſes a leaf ſo ſituated, that it makes an acute angle with the ſtalk.

Patent expreſſes a leaf which ſtands almoſt ſtraight out from the ſtalk, or nearly at right angles with it.

Horizontal, or *patentiſſimum*, is a leaf which grows perfectly horizontally with the ſtalk, or truly at right angles with it.

Reclinate, or *reflex*, expreſſes a leaf which has it's ſummit lower than it's baſe.

Revolutum expreſſes a leaf, the upper part of which rolls itſelf downward.

Radicans expreſſes a leaf which puſhes out roots from it's diſk, or lower ſurface.

Natant expreſſes a leaf which floats upon the ſurface of the water.

Seminal expreſſes the leaf which appear firſt from the ſeed of a plant, and is uſually different from the reſt.

Radical expreſſes a leaf which grows immediately from the root of a plant, not from the ſtalk.

Cauline expreſſes a leaf which grows not immediately from the root, but on the ſtalk of a plant.

Ramoſum expreſſes a leaf which grows not on the main ſtalk, but on it's branches.

Subulare, a leaf which grows at the ramifications, or under that part of the ſtalk from whence there grow one, or ſeveral branches.

Florale expreſſes a leaf that is formed near the flower, and which never appears but with the flower.

Peltatum expreſſes a leaf, the petiole of which is affixed to the diſk itſelf of it, and not to the baſe, or to the edge of the leaf.

Seſſile expreſſes a leaf which riſes immediately from the ſtalk, without any pedicle.

Decurrent expreſſes a leaf which adheres immediately to the ſtalk, or branch of a plant, without any pedicle, and which has it's lower part extended, and running ſome way along the branch.

Amplexicaule expreſſes a leaf, the baſe of which extends itſelf in ſuch a manner, that it environs and ſurrounds the ſtalk every way; in this caſe the leaf is generally of a ſagittated, or heart-faſhioned, ſhape, and is ſeſſile.

Semiamplexicaule expreſſes a leaf reſembling the amplexicaule, but with it's lobes at the baſe, too ſmall to entirely ſurround the ſtalk.

Perfoliate expreſſes a leaf, the diſk of which is pierced by the ſtalk, the branch, or the peduncle, and does not any where touch or adhere to it's edges.

Connate expreſſes leaves cohering together, or whoſe baſes unite ſo as to form but one body.

Vaginans expreſſes a leaf, the baſe of which is formed like a cylinder, and ſurrounds the ſtalk, as is the caſe in many of the graſſes.

Articulated expreſſes leaves which grow one on the top of another.

Stellate expreſſes leaves which grow not leſs than ſix at a joint, and are arranged like the rays of a ſtar.

Ternate expreſſes leaves which grow three at a joint, ſurrounding the ſtalk; when there are four or five, they are called *quaternate* and *quinate*; when more than ſix, *ſtellate*.

Oppoſita expreſſes leaves which ſtand two and two, with the ſtalk between them.

Alternate leaves, which do not ſtand oppoſite, but one over another all the way up the ſtalk.

Sparſa, leaves which are placed irregularly over the ſeveral parts of the plant.

Conferta expreſſes leaves placed in cluſters, or ſo cloſe to one another, that it is not eaſy to diſcover their exact ſituation.

Imbricata expreſſes leaves placed over one another, in the manner of the tiles of a houſe, or like the ſcales of fiſhes.

Faſciculata in little packets; this expreſſes leaves, many of which ariſe together from the ſame point.

Frondes expreſſes leaves, conſiſting of ſeveral other leaves, and forming the whole of the plant; as is the caſe in the fern kind, in which, the fructification being on the back of the leaves, the ſingle leaf makes the whole plant. In this caſe it is not called *Folium*, but *Frondis*.

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THE HISTORY OF PLANTS.

PART I.

BOOK I.

Of SUBMARINE PLANTS.

THE freſh waters produce a great number of plants, many of which are in all reſpects like thoſe of the land, and have perfect and obvious fructifications, tho' no part of them ever reach the ſurface; but it is otherwiſe with the Submarie ones. They are wholly unlike other plants in their form, texture, and manner of growth, and have either no viſible fructifications at all, or ſuch as are very difficultly underſtood, as to their ſtructure, and method of fœcundation.

Their manner of growth alſo is wholly different from that of other plants.

Plants in general have been defined to be organiſed bodies, nouriſhed by means of roots which penetrate into the earth; but the Submarines have no ſuch roots, they adhere to the bodies, which ſupport them by broad baſes, which do not penetrate into the ſubſtance they are affixed to, nor is that generally a matter capable of affording nouriſhment, if they did: a piece of ſtone, or even a glaſs bottle, or any other thing, ſunk in the ſea ſerving for this purpoſe. The part by which they are fixed, evidently anſwers no other purpoſe beſide that of fixing them; and the plants themſelves ſeem to be all over root, or to take in nouriſhment from the circumambient water, by pores placed all over their ſurfaces.

In plants in which the parts of fructification can give us no characters for diſtinguiſhing the orders and genera, we muſt have recourſe to other differences: of theſe the moſt obvious are the moſt eligible.

The texture of the Submarine plants is of three very different kinds, and, according to this, we ſhall therefore arrange them under three claſſes.

Submarines; Claſs the Firſt. Thoſe which are of a ſtony hardneſs, and not flexile.

Submarines; Claſs the Second. Thoſe which are of a very firm and tough texture.

Submarines; Claſs the Third. Thoſe which are of a tender and herbaceous ſtructure.

SUBMARINES.

Claſs the Firſt. Genus the Firſt.

MYCEDIUM.

MYCEDIUM is a genus of Submarines of a hard and ſtony ſubſtance, not branched, regularly cavernoſe and lamellated; formed of gyri, or ridges very hard, and ſolid, ſurrounding the ſurface, or running over it in various windings and meanders, and leaving oblong, winding or undulated, cavities between them, which cavities are filled up with a matter of the ſame kind, formed into very thin plates or lamellæ of various ſtructure.

No part of fructification has ever been diſcovered in any ſpecies of this genus.

Theſe plants, from their reſemblance to the Fungi in their ſtructure and lamellæ, have been called by authors in general Fungi marini; to prevent confuſion from ſimilar ſounds we have called them Mycedia, from the Greek μυκή, fungus.

1. *Mycedium convexum gyris ſulcatis.* Brainſtone.
The convex Mycedium with ſulcated gyri.

This is one of the largeſt of this genus. It is affixed to a rock, or other ſolid body, by a conſiderably broad baſe; from this it extends itſelf into an irregularly convex figure, ſometimes globular, ſometimes gibboſe, and ſometimes more flat. It grows very frequently to ten inches or a foot in diameter; ſometimes to two feet or more. It is compoſed of a multitude of gyri or ridges, running in undulated figures, and divaricating into a multitude of others, which in many places grow to one another again. Theſe ridges are of a very ſolid matter, and of a white colour; they are broader than a large packthread, and are ſulcated or marked with a depreſſion all the way along their middle. The interſtices between theſe gyri are furniſhed with lamellæ, or thin plates of the ſame hard matter, diſpoſed in a double row in each interſtice. Theſe leave a multitude of ſmall unequal cavities between them. The great irregularity of the diſpoſition of the gyri renders theſe interſtices of various figures; they are uſually oblong, but ſometimes a few round ones are formed here and there: theſe form perfect reſemblances of the Aſtroites or ſtarry coral. The interſtices between the gyri are large. This ſpecies is extreamly common on the ſhores of America, and on thoſe of the Eaſt Indies; we know it in England under the name of the Brainſtone, a name given it from its reſembling in ſome degree the appearance of the brain. Boerhaave calls it Fungus maritimus coralloides undulatus; and Ray, Lapis fungites cerebriformis.

2. *Mycedium convexum gyris integris.*
The convex Mycedium with undivided gyri.

This is a leſs common, but a much more beautiful ſpecies than the former. It grows from a large baſe affixed to a rock, to a very conſiderable ſize: a foot in diameter is not uncommon with it. It is ſometimes highly convex on the ſurface, but it more uſually riſes leſs, and that in an irregular manner, ſome parts of its ſurface being much higher than others. It is all over undulated with gyri, which run in a beautiful irregularity over it, and join and divaricate again ſo frequently, that the configuration is ſtrangely confuſed. Theſe gyri are very ſlender, and the interſtices, from their great number in the maſs, are very ſmall between them. The gyri are not ſulcated as in the former ſpecies, but riſe up in ridges, when perfect, though they are generally worn down to a flatneſs by the motion of the water. The lamellæ between theſe are very fine, and arranged in a double row, forming very ſmall cavities between them. This grows on the ſhores of Barbadoes, and in many other parts of the Weſt Indies. It is ſometimes met with in the ſhops with us, confounded with the other under the common name of Brainſtone. Beſler deſcribes it under the name of Maſſa coralloides maris fluctuationem repræſentans.

3. *Mycedium cavatum undulatum.*
The Hollowed undulated Mycedium.

This is a very elegant body. It's general ſtructure is the ſame with that of the convex kinds, but it differs extreamly from them in figure. It grows to the rocks by a ſmall baſe, not thicker than a wheat-ſtraw; from this it expands itſelf every way, till at an inch height it is often two inches in diameter, and from this it expands to three, four, or more inches. From the baſe to within half an inch of the top, it is uſually ſmooth; from this part to the edge it is ſtriated; and it's top is very beautifully undulated. It's circumference is a deeply ſinuated line, and the two ſides come every-where ſo near one another, as to leave but about half an inch for the lamellæ. The margin terminates every-where in a thin edge. The lamellæ fill up the intermediate ſpace in a double ſeries, joined as in the others by an opake white line of a ſpungy texture in the middle; the lamellæ are very finely ſerrated, and, as they do not ſtand very cloſe to one another, they make a beautiful appearance. The whole plant is white as ſnow, and of the hardneſs of marble. It grows on the ſhores of the Baltic in great abundance, and is found alſo on thoſe of the Eaſt and Weſt Indies. Beſler deſcribes it under the name of Fungus ſaxeus minor, and Sir Hans Sloane under that of Fungus lapideus minor undulatus.

4. *Mycedium obverſe conicum.*
The inverted conic Mycedium.

This is a much more ſimple ſpecies than any of the former in its external appearance, but it is more beautiful than moſt in it's internal ſtructure. It grows to an inch or two in height, and to the thickneſs of a man's thumb; ſometimes much larger, but this is its uſual ſtandard. It is affixed to the rocks by a ſmall and ſlender baſe; from this it gradually enlarges, and grows into the form of an inverted cone, the top being wider than any other part. The external ſurface is irregularly ſtriated, the limb or verge beautifully undulated, and the whole cavity is filled up with thin, but long and broad lamellæ, riſing from all parts of the internal ſurface, and meeting in or near the center; theſe do not ſtand very cloſe, but leave deep, ſimple hollows between them. The whole is ſometimes of a pure, fine white, ſometimes of a browniſh white colour, and is of a hard and ſtony texture. This is the uſual appearance of this plant, but it is ſubject to great variations; ſometimes it grows to a much greater length, with little more thickneſs; ſometimes it is ſhorter and broader, and ſometimes ſeveral plants of it grow one out of another, in the manner of the cups in the proliferous cup moſſes; in this laſt ſtate, it makes a very elegant figure.

It is found, in all its variety of appearances, about the coaſts of the Eaſt Indies, and not unfrequently on thoſe of America. Beſler has deſcribed this under the name of Fungus coralloides pezizæ forma; others called it Fungus ſaxeus vulgaris.

5. *Mycedium patulum cancellatum.*
Open cancellated Mycedium.

This is a yet more elegant plant than the conic Mycedium; it riſes like it from a ſmall baſe, and gradually expands to a conſiderably wide mouth. It's uſual height is an inch an half, it's breadth about an inch. It's external ſurface is ſtriated pretty deeply, and is lightly marked with tranſverſe lines. It's edge is undulated, and the expanſion is ſometimes roundiſh, ſometimes oblong, and often perfectly irregular. It's whole cavity is filled up with long and fine lamellæ, which form cavities between them, which are again intercepted by regular tranſverſe flakes, of the ſame ſubſtance with the lamellæ themſelves, and equally thin. This is a very beautiful plant in this it's common ſtate; but nature frequently luxuriates and forms oblong bodies, compoſed of ſeveral of theſe placed on one another. It's colour is white, and its texture ſtony. It is found about the ſhores of Italy, on thoſe of ſome of the iſlands of the Archipelago, and in many other places. Some of the old botanical writers have left us imperfect deſcriptions of this, under the name of the Alcyoicum quintum Dioſcoridis.

6. *Mycedium planum lamellis longiſſimis.*
The flat Mycedium with very long lamellæ.

This is alſo an extreamly beautiful ſpecies, and perfectly different from all the reſt. It grows to the rocks by a broad baſe, which is often placed at one edge, not in the center, as in the other Mycedia; from this it expands into various long and broad plates, of different thickneſſes, and very irregular figures. The under ſurface of theſe is often protuberant in ſome places, and hollowed in others, and is irregularly furrowed with longitudinal lines running from the baſe toward the edge; its upper ſurface has a number of irregular gyri, broad, ſolid, and white, ſometimes plain, ſometimes punctated on their ſurface; and between theſe there run very longand conſiderably thick lamellæ.

This often grows to a foot or more in length, and near as much in breadth. Imperatus has deſcribed it under the name of Fungus petroſus, and Boerhaave under that of Fungus coralloides agarici forma. It is frequent about the American iſlands.

After theſe general deſcriptions of the more ſingular ſpecies of the Mycedium, the others will eaſily be known by their names: They are, 1. A yellowiſh-white Brainſtone Mycedium, with thin gyri. 2. A large kind, with blackiſh gyri, and white lamellæ. 3. The Brainſtone Mycedium, with its cavities divided by tranſverſe ſepta. 4. The Brainſtone Mycedium, with extreamly thin lamellæ. 5. The Brainſtone Mycedium, with large cavities. 6. The Cup Mycedium, with lamellated pores. 7. The Cup Mycedium, with undulated laminæ. 8. The funnel-ſhaped Cup Mycedium. 9. The high-ridged, flat Mycedium.

Theſe are the different ſpecies hitherto known, beſide thoſe already deſcribed: deſcriptions of theſe would be tedious, and are unneceſſary, as the general ſtructure is the ſame in all, and their ſpecific names are ſufficient to expreſs their differences. The variety of the Mycedia is indeed almoſt infinite; and people who do not examine their real characters, but judge of them by their form, might extend the number of ſuppoſed ſpecies to more than a thouſand. Where we know nature ſports in variation ſo much, we are to be upon our guard againſt taking varieties for ſpecies. All the Mycedia I have ſeen may be juſtly referred to one or other of theſe kinds.

All theſe Mycedia, and many of the Aſteræ of the following genus, are taken up by the people of the Weſt Indies for burning into lime. They make a very good ſort, but leſs durable than that burnt from hard ſtone.

SUBMARINES.

Claſs the Firſt. Genus the Second.

ASTERÆA.

ASTERÆA is a genus of Submarines, conſiſting of a ſtony matter, formed into ſimple or unbranched maſſes, regularly cavernoſe and lamellated, made up of ſolid gyri, or ridges, running into round, or nearly round configurations, and forming cavities of the ſame ſhape, which have lamellæ propagated from their ſides, and converging to a point in the center, and by that means produce in each cavity the figure of a radiated ſtar.

No part of fructification has ever been diſcovered in any of the ſpecies of this genus; but the botanic writers have, from the figure of a ſtar in the cavities, given it the name of Fungus Aſtroites, or, ſimply, Aſtroites: the ſame word Aſtroites being uſed ſomewhat more properly for this body in its foſſile ſtate, we have, to avoid confuſion, called it in its native ſtate Aſteræa.

1. *Aſteræa ſtellis majoribus ovatis.*
The large, oval ſtarred Aſteræa.

This is one of the leaſt beautiful ſpecies of this genus; it is of a coarſe ſtructure, and duſky white colour; it riſes from a broad baſe, and expands into a large thick maſs, of an irregularly convex figure. Its general ſize is that of a man's head, but is often twice or thrice as large. Its ſurface is formed of gyri, arranged into irregularly oval figures, with

with no ſpaces between them, and the cavities of them furniſhed with ſhort lamellæ meeting in the center; the matter of the gyri is coarſe, and they are conſiderably thick, and ſomewhat rounded on their ſurfaces. They are often worn down by the motion of the ſea, and are then found to be cavernous in their ſtructure. The lamellæ are moderately thick, and are not placed very near one another.

This ſpecies is frequent about the ſhores of the Eaſt Indies, and in many other places. Beſler has deſcribed it under the name of Fungus lapideus poroſus; and Boerhaave calls it Fungus coralloides aſtroites.

2. *Aſteræa ſtellis majoribus, rotundioribus.*
The Aſteræa, with large, round ſtars.

This is a very beautiful ſpecies. It grows to a conſiderable ſize, a foot in diameter, or more than that; and is of a beautiful white colour, and great hardneſs. It adheres to the rocks by a broad baſe, and from thence it extends itſelf in a circular manner, riſing into the form of a ſegment of a ſphere. It's whole ſurface, in ſight from above, is ſtarry; it is formed of gyri, conſiderably thick, ſolid, and of the colour and appearance of white marble. Theſe run into very regular circles, and form a beautiful appearance. Nature is not ſo perfectly regular in the ſtructure of this body, but that ſome of the circles blend with, or injure one another, and by that means produce irregular figures; but the greater part are very perfectly round; and, as circles are figures which can only touch in ſmall parts, there are ſpaces of various figures interſperſed every-where between the circles, by which this ſpecies is, at ſight, diſtinguiſhed from the former. Theſe ſpaces are filled up with lamellæ, produced from the external ſurfaces of the gyri; and the cavities within the gyri are regularly and beautifully ſtellated, lamellæ from all parts of the internal ſurface running to meet in the center. Theſe lamellæ are moderately thick, and ſtand at a conſiderable diſtance from one another. There frequently are not more than ten, ſometimes only five or ſix of them in each cavity, with the rudiments of ſome imperfect ones between.

This beautiful ſpecies is found about the ſhores of Jamaica.

The diſtinctions between theſe Aſteræ have been ſo little attended to by authors, that we cannot fix any certain ſynonymon for this ſpecies: it is probably one of the Fungi coralloidis aſtroitidis variæ ſpecies of Boerhaave; but he has not been at the pains to diſtinguiſh them.

3. *Aſteræa ſtellis minoribus rotundis.*
The ſmall, round-ſtarred Aſteræa.

This is an extreamly elegant ſpecies, and is leſs common, as well as more beautiful, than either of the former. From a roundiſh flat baſe it expands itſelf into a very convex, but irregularly-figured maſs, ſometimes roundiſh, oftener oblong. It is very white, and of a very firm texture: its uſual ſize is that of a man's fiſt; but it ſometimes grows conſiderably larger. Its ſurface is formed of gyri, ſmooth, ſolid, and conſiderably thick, which form themſelves into roundiſh figures, ſometimes perfect, but oftener injured by one another. The ſpaces between theſe are as beautifully lamellated as the cavities they form: the cavities themſelves are very ſmall, and are filled with numerous and very thin lamellæ, placed ſo cloſe, that there are often between twenty and thirty in a cell. They are of a leſs bright white than the gyri, but they make a very beautiful figure, reſembling moſt of all the ſpecies, a radiated ſtar.

This is found about the ſhores of Antegoa, and in ſome other parts of America.

4. *Aſteræa ſtellis magnis angulatis.*
The great angular-ſtarred Aſteræa.

This is one of the largeſt ſpecies of this genus: 'tis of an extreamly ſolid and firm texture, and of a yellowiſh-white colour; though the yellowneſs eaſily wears off, on its being expoſed to the air. It grows to the rocks by a firm baſe, which conforms itſelf to the ſhape of the part of the rock it grows to; and from this it extends itſelf to eighteen or more inches in breadth: its maſſes are uſually rounded, and ſomewhat convex, but more flatted than thoſe of any of the others. Its ſurface is compoſed of gyri, which are very thick, and ſomewhat rounded on their ſurface: theſe touch in all points, ſo that

there are no ſpaces between; and they form, by this means, irregularly pentangular or hexangular figures. Theſe are large, and their cavities filled up with very numerous, thin, and beautiful lamellæ: there are often ſixty, or more of theſe in a cavity.

This ſpecies is found in the Mediterranean, growing often deep under water, on the rocks near the ſhore.

5. *Aſteræa gyris craſſiſſimis planis.*
The thick and flat partitioned Aſteræa.

This is by much the moſt ſingular of all the ſpecies of Aſteræa; in all the others the ſtars make up the greateſt part of the ſurface, whence we have named them from thoſe, as the moſt obvious marks of diſtinction; in this, the gyri take up the far greater part, whence we name it from them. This grows from an extreamly large and broad baſe, which ſeems indeed a kind of core to it; the matter of the ſurface often making only a ſhelly covering over it. It is uſually met with of the bigneſs of a hen's egg, or thereabout, but it ſometimes grows much larger. Its figure is rounded, and very convex. The gyri are extreamly hard, and as white and ſolid as ivory near the ſurface; within they are full of holes. They do not riſe into rounded ſurfaces, as in many of the other ſpecies, but are flat, and, in general, of the breadth of a large ſtraw; in ſome places, where they coaleſce, they are much more: they are diſperſed over the ſurface in irregular and ſtrange forms; but they every-where make cavities, which are ſmall, and of a roundiſh, or irregularly-oval figure; theſe are radiated with lamellæ, in the ſame manner as thoſe of the reſt. They are thin, ſmall, and not placed very near one another; and it is ſingular in this ſpecies, that the ſtars are deep ſunk in from the ſurface, ſo that the gyri only, at a little diſtance, are ſeen; and theſe give the whole much of the appearance of that kind of muſhroom which we call the Morel.

This is leſs frequent than the others, and is oftener found in the Eaſt Indies than any where elſe. Boerhaave, from its external reſemblance to the boletus, or morel, calls it Fungus marinus lapideus boletum Tournefortianum referens: he adds, Colore cinereo. But the true colour of the ſpecies is pure white.

Theſe are all the diſtinct ſpecies of the Aſteræa yet known; the varieties of them are almoſt innumerable, but all may be referred to one or other of theſe.

SUBMARINES.

Claſs the Firſt. Genus the Third.

MADREPORA.

MADREPORA is a genus of Submarines, of a ſtony hardneſs, but ſomewhat approaching to the ordinary figure of vegetables in its form. It is compoſed of a main ſtem, divided and ſubdivided into a number of branches, which are full of pores, or holes, running from the circumference to the center of the branch, and furniſhed with lamellæ, diſpoſed in a ſtellar or radiated manner.

The ſurface in ſome of the ſpecies is ſmooth, and the pores larger, and at greater diſtances. In others it is ſtriated, and the pores are ſmaller and cloſer. The ſtriæ in theſe ſpecies are formed of a kind of lamellæ, growing from the ſurface of the tubules which form the pores. Theſe always ſtand out beyond the reſt of the ſurface, and their cavity is frequently intercepted by little tranſverſe lamellæ within, which divide it into cells, in the manner of the cavities in the nautili and cornua Ammonis. Many of the Madreporæ approach to the nature of coral in their texture: others of them are leſs hard.

1. *Madrepora glabra poris magnis.*
The ſmooth Madrepora with large pores.

This is the plant generally known under the name of White Coral. It is a very beautiful ſpecies of Madrepora. It grows to eighteen or twenty inches in height, and frequently extends it's ramifications ſo wide every way, as to be in the whole nearly as much in diameter. It grows up with a ſingle ſtem, of the thickneſs of a man's thumb,

or

or more: this is not ſtrait, but tortuous, and full of prominent tubules, open at their tops, and forming pores; this main ſtem ſoon ſends off a number of branches, which again ramify into ſeveral more, extending themſelves every way, and ſending out, at different ſpaces, other ſhort branches, which ſeem, indeed, no more than long tubules, or conduits of pores. Beſide theſe, the whole plant has it's ſurface ſpangled over with pores, at ſmall diſtances, a quarter of an inch, or more, being left ſolid between them, ſometimes conſiderably more. The pores in the larger branches are ſuch, as will admit a tare; in the ſmaller branches they are leſs, but in all conſiderably large. They ſtand out a little way from the ſurface, and have a ſmooth edge: within they are radiated with lamellæ, like thoſe of the aſteræa. The colour of this ſpecies is a fine, bright white; and it's ſurface between the pores is bright and gloſſy. It looks perfectly ſmooth, till cloſely examined; but it is then found to be lightly ſtriated, eſpecially in the larger parts of the plant. The branches, when broken, ſhew a ſolid texture, except juſt where the pores run; they are whiter within than on the ſurface, and the conſtituent matter ſeems very like that of red coral.

It is found on the rocks, under water, about the ſhores of Italy, and in many other places. Tournefort calls it Madrepora vulgaris; C. Bauhine, Corallium album oculatum officinarum.

2. *Madrepora ſtriata poris minoribus frequentioribus.*
The ſtriated Madrepora with more frequent and ſmall pores.

This is an extreamly elegant plant. It riſes with a ſingle ſtem, of an inch, or more, in diameter, which ſoon divides itſelf into a great number of branches; and theſe ſend off others, till, from the whole, there is formed a beautifully ramoſe figure, of a foot or two in height, and nearly of as much in diameter. The branches are many of them as thick as a man's thumb; they are uſually a little crooked, and all point upwards. The whole plant is uſually of a beautiful white, ſometimes greyiſh, and is very brittle, which is owing to its being very porous. The ſurface is all over covered with little prominences, of the bigneſs of half a barley-corn, or thereabout. Theſe are broadeſt at the baſe, and ſmaller at the point, and are lamellated very finely and beautifully on the outſide. Theſe lamellæ are continued from the ſummit of one protuberance to the baſe of another, and, by that means, form the ſtriated ſurface of the whole plant: theſe protuberances are the tubules of the pores: they are all open at top, and are beautifully lamellated within, their lamellæ, like thoſe of the external ſurface, being extreamly thin and fine. If a branch is broken, it is found to be of an extreamly lax and cavernous texture, and every pore of the ſurface is ſeen to be carried down to the center, where there runs up another cavity, filled with lamellæ, as the reſt are, up to the ſummit of the plant.

This is frequent about the ſhores of the Eaſt Indies, and is ſometimes met with about thoſe of the Caribbee Iſlands; it grows to the rocks, at a little depth under water.

3. *Madrepora poris depreſſis.*
The Madrepora with depreſſed pores.

This is a very beautiful ſpecies of Madrepora, and very different in it's ſtructure from moſt of the others; it does not grow to the height that many of them do, but it expands ſufficiently in breadth, and it's branches are not round, but flattiſh. It riſes with a ſingle ſtem, of a very irregular figure, protuberant, but flattiſh; this, at the height of an inch or two, divides into ſeveral branches, which uſually extend themſelves horizontally, and are flat, often about an inch in breadth, and not more than a third of an inch in thickneſs: theſe alſo frequently ſend off other branches of the ſame figure; but ſome of theſe, as well as ſome of the large ones, approach more to roundneſs than the others. The whole plant often extends to a foot or more horizontally, though not above five inches in height. It's colour is a pure white. It's ſurface is covered with little roundiſh depreſſions, capable of admitting the head of a moderate pin; they ſtand very cloſe to one another, and the interſtitial matter between them is granulated: among theſe pores there riſe alſo, on different parts of the branches, a vaſt number of little protuberances, about an eighth of an inch in length, and nearly as much in diameter, and of a perfectly irregular figure: theſe are not the tubules of pores as the

pro-

protuberances on the ſurface of the former ſpecies are, but are ſolid, and themſelves covered with depreſſed pores on their ſurfaces, like the reſt of the branches. The bottom of theſe depreſſions ſeems ſolid, but, when nicely examined with a microſcope, it is found to be full of ſmall holes, which communicate with cavities within. A branch of this ſpecies broken appears of a very beautiful white, but full of pores and cavities; there runs along the center of every branch, indeed, a cavity, furniſhed with it's lamellæ, affixed to an axis in the middle; and from this are propagated other cavities ſideways, formed in the ſame manner, and cummunicating with the pores or depreſſions on the ſurface.

The deſcriptions botanic writers have given of theſe bodies are ſo very imperfect, that it is not eaſy to ſay whether any of them have deſcribed this, or whether it is a new ſpecies. I received it from the Eaſt Indies, where it is common on rocks under twenty or thirty feet water.

4. *Madrepora ramoſiſſima poris minimis.*
The moſt branched Madrepora with very ſmall pores.

All the Madreporæ are beautiful, but the elegantly-branched figure of this gives it a ſuperior beauty to them all. It riſes from a broad baſe, fixed to a rock, with a ſingle ſtem, of the thickneſs of a man's thumb; this continues naked for four inches, or thereabout, after which, and ſometimes ſooner, it begins to divide into a number of branches. It grows in the whole to about a foot in height, and eight or ten inches in extent. It's branches are beautifully ramified, till at length they terminate in portions ſcarce thicker than a packthread; and they ſend out a number of theſe ſmall ſhoots alſo ſideways, whence the whole has much the appearance of a ſhrub, with branches and leaves upon it. The ſtalks are all round, and are beſet with multitudes of extreamly ſmall pores, which ſcarce have their edges at all raiſed above the reſt of the ſurface: theſe pores ſtand very cloſe, but the interſtitial matter between them is alſo porous. The pores of the larger kind are ſcarce big enough to admit the head of a ſmall pin, the others are hardly diſtinguiſhable by the naked eye. The plant is brittle, and it's branches, when broken, appear cavernous or ſpongy. Cluſius was the firſt author who deſcribed this plant; his deſcription is but imperfect; his name for it, Abrotanoides, planta ſaxea. Boerhaave calls it alſo Madrepora abrotanoides, as have moſt of the other botanical writers, from a ſuppoſed reſemblance of its fineſt ramifications to the leaves of the abrotanum fœmina. It's general colour is a beautiful white, but it is ſometimes found greyiſh or yellowiſh. It's ramifications alſo uſually terminate in ſharp points, but they are often found obtuſe and rounded, by the motion of the water. Authors have made three ſeveral ſpecies of it: 1. Yellowiſh Madrepora abrotanides. 2. A grey one with ſharp-pointed tops; and, 3. A grey one with obtuſe tops. It is found deep under water near the Eaſt Indies, in conſiderable abundance. It grows to the rocks or to looſe ſtones.

Theſe are the moſt beautiful and the moſt ſingular ſpecies of the Madrepora; and they explain the four ſeveral appearances of the plants of this genus. Many authors have extended the number of ſpecies very far, by reckoning the varieties of one or other of theſe, or the others, as ſuch: the real, diſtinct ſpecies, however, beſide the four already deſcribed, are, 1. The great tree Madrepora of authors: this grows to two feet high, and is two inches or more in diameter at the baſe. 2. The great ſtony Madrepora. 3. The coral-like Madrepora with a ſmooth ſurface. 4. The little Madrepora with very ſmall pores. 5. The Madrepora with larger tubercles. 6. The bladder Madrepora. 7. The brown, ſmall, ſtarred Madrepora. 8. The cypreſs Madrepora: this much reſembles the laſt of thoſe deſcribed here, but it's ramifications are ſhorter. 9. The buckthorn Madrepora. 10. The broad-branched Madrepora. 11. The Madrepora with foliated extremities. 12. The fibroſe Madrepora: this is diſtinguiſhed from all the others by it's being covered with ſtony excreſcences, as fine as hairs.

After the generical characters and deſcriptions of the former ſpecies, theſe will eaſily be known by the characters conveyed in their names.

SUBMARINES,

SUBMARINES.

Claſs the Firſt. Genus the Fourth.

ESCHARA.

ESCHARA is a genus of Submarines, compoſed of a gritty matter, but not very hard, of a reticulated texture, and ſometimes diſpoſed into the form of leaves; always conſiſting of a thin expanded matter, perforated with numerous holes, roundiſh, oblong, or irregular in figure, and theſe ſo cloſe to one another, and ſo equally continued through the ſubſtance, as to give the whole the appearance of a net.

1. *Eſchara latiſſima undulata.*
The undulated broad Eſchara.

This ſpecies adheres to rocks or ſtones by a broad baſe; from this it riſes in form of a thin and flat undulated cruſt, narroweſt at the baſe, and expanding itſelf toward the extremity. Sometimes a ſingle body of this kind, ſometimes ſeveral ſuch ariſe from the ſame baſe. They are ſix or eight inches over in their broadeſt part, and are irregularly curved, and jagged at the edges, and ſinuated round the top; they ſometimes riſe perpendicular, ſometimes grow out horizontally; they ſeldom exceed the thickneſs of a crown-piece any where, except near the baſe, and toward the extremities they are much thinner. They are every where pierced with irregular holes, and thoſe placed ſo cloſe to one another, eſpecially toward the extremities, that the interſticial matter only forms irregular lines of no great breadth between them; nearer the baſe it is more ſolid, and the holes are fewer. It's genuine colour is a pale, greyiſh brown, but it is often found quite white. It grows uſually under twenty or thirty feet water, ſometimes in ſhallower places; ſeen in its growing ſtate, it makes a very beautiful figure, but it is very rare to have it taken up entire. It is ſo brittle, that the leaſt violence breaks it to pieces.

It is common about the ſhores of the Mediterranean. Imperatus calls it Retepora; others, Eſchara marina, and Porus reticulatus; Cæſalpine, by the ſtrange name Roſa marina.

2. *Eſchara marginibus cauliculatis.*
The ſtalky edged Eſchara.

This is to the full as elegant and beautiful a plant as the former. It riſes from a broad, ſmooth baſe. Two or three, ſometimes more plants of it, ariſe together; ſometimes only a ſingle one. Each plant is ſomewhat like a large oblong leaf in form, but very different in texture. It is formed of a gritty matter, two inches or more broad near the baſe, and a third of an inch thick; from this part it lengthens and expands itſelf in an irregular manner, growing to ſix or eight inches long, and nearly as much in width; it is deeply jagged at the edges, and at the top. It's whole ſubſtance is pierced with a great number of pores or holes of an irregular figure, but what is ſingular in it is, that all round its edges and ends there grow a ſhort kind of ſtalks of a flatted figure, and of the thickneſs of a ſmall packthread; theſe unite with one another at their ends, and by the extremities of their ſeveral ramifications, and by this means form a perfect reſemblance of a net; the ſtalks themſelves looking like the cords or thread, and the cavities between them reſembling meſhes or holes. This elegant and open reticulated edge gives a great beauty to the plant; the whole of it is of a fine white colour. It is frequent about the ſhores of the Eaſt Indies, but it is ſo brittle, that we very rarely meet with a tolerable ſpecimen of it.

J. Bauhine has deſcribed it under the name of Eſchara marina frondipora; and C. Bauhine and Imperatus, under that of Frondipora and Eſchara marina.

3. *Eſchara ramoſa dichotoma.*
Branched dichotomous Eſchara.

This is an extreamly ſingular ſpecies of Eſchara, ſofter and leſs brittle than either of the others, but of the true reticulated texture, which diſtinguiſhes the genus.

It grows to ſtones, ſhells, or other ſubſtances lying at the bottom of the ſea, by a broad baſe; from this it ariſes flat and thin, and of about half an inch, or leſs, in diameter. It does not continue ſingle a quarter of an inch, but often immediately from the baſe divides into a number of branches, ſix, eight, or more; theſe divide again at an inch height, and their ramifications divide yet again. The diviſion is always into two, or in the Dichotomous order. The ſeveral branches are narrow at their baſe, and grow gradually broader all the way to the extremity. They form a large cluſter upon the whole, of a roundiſh figure, three or four inches in height, and as much in diameter. The branches are ſcarce a ſixth of an inch broad near the baſe, and half an inch or more at the top. They are no where thicker than a coarſe paper.

The whole plant is of a pale, browniſh white colour, and of a ſomewhat gritty, friable texture, but much leſs ſtony between the teeth, and leſs brittle than either of the former. It is all over of a very elegantly reticulated texture; the holes are capable of admitting the head of a very ſmall pin, and they ſtand ſo cloſe, that the diviſions between them are ſcarce ſo thick as the fineſt hair. The holes are of an oval figure.

The plant, in its manner of growth, extreamly reſembles ſome of the dichotomous fucus's, and has been thence called by Ray and other authors, Fucus telam lineam ſericeamve textura ſua æmulans. John Bauhine calls it Alga marina platyceros poroſa; and Imperatus, Porus cervinus. It is frequently thrown up on our own coaſts.

It is a wonder that authors ſhould not conſider, before they ranked this with the fucus's, that it is not tough like them, but fragile, and may be rubbed to pieces between the fingers.

4. *Eſchara convoluta.*
The convoluted Eſchara.

This is a very ſingular ſpecies. It grows to ſtones, ſhells, or other ſolid ſubſtances, at the bottom of the ſea, by a flat and broad baſe. From this there ariſe five or ſix ſtalks of a flattiſh figure, hollow, and of the thickneſs of a ſmall thread; theſe immediately divaricate into a number of others, and become ſo very numerous, that they form a cluſter of an inch diameter, which is more than their utmoſt height. The branches are ſtrangely twiſted and entangled among one another, and they coaleſce at their extremities and in many other parts, ſo as in the whole to form a kind of network, the ſolid ſubſtance of which is much more in quantity, than the cavities or meſhes. The whole plant is of a beautiful white colour, and often, by its various inoſculations and coaleſcences of the branches, forms in the whole a ſort of globular figure. It is brittle, and eaſily ground to powder between the teeth. It is frequently caſt up on the ſhores of the Mediterranean, but is ſo little regarded, that we ſeldom meet with it in the collections of the curious. J. Bauhine and Ray ſeem to have deſcribed it under the name of Reticulatum tophaceum marinum. Bauhine ſays, the cluſter of it reſembles a net wound up into a bundle, which is a very juſt obſervation.

SUBMARINES.

Claſs the Firſt. Genus the Fifth.

TUBULARIA.

TUBULARIA is a genus of Submarines, conſiſting of cylindrc tubes, riſing from a thin cruſt of the ſame matter with themſelves, which is of the hardneſs and ſtructure of coral. Of this ſingular genus we at preſent know only one ſpecies.

Tubularia

TUBULARIA.

The first appearance of this elegant body is a thin crust of a purple coralline matter, extending itself over any solid substance, and conforming itself to its shape. This is of the thickness of a common writing paper, or a little more, and of a smooth surface. From this there soon arise a number of hollow cylindric bodies, of the same colour, and formed of the same matter with the crust. These are of the thickness of a large packthread, and run up naked to about a third of an inch in length; they are very thin in the crust, and contain a simple cavity within; at the height of about a third of an inch, there is formed another crust like that from which the tubes arose; this forms an even surface about the tubes, whose tops stand a little way above it, and are there closed with a transverse septum of the same matter with the rest. From this crust the tubes are continued a third of an inch more, where there is another such crust, and so on to the top. The tubes generally grow in great clusters, two or three hundred together, and are connected firmly at these short distances by the crusts: the whole often rises to three or four inches in height, and is of two inches or more in diameter. It's upper surface is composed of a crust like the rest, with the mouths of the tubes just appearing above it, and seeming prepared for a continuation of growth as from the base; it is frequent to see from six to ten or twelve of these crusts in a mass, distinguishing it as it were into so many series of tubes, though in reality the same tube is carried up all the way from the base to the top, only separated in its cavity by these transverse septa. It is common about the shores of the East Indies, and adheres usually to the large corals, sometimes to shells or stones. It is throughout of the colour of red coral, and makes a very beautiful appearance. Imperatus calls it Tubularia purpurea; and C. Bauhine, Corallis affine alcyoicum rubrum.

SUBMARINES.

Class the First. Genus the Sixth.

ACETABULUM.

ACETABULUM is a genus of Submarines, consisting of a single stalk, sustaining at it's summit a round body, at first hollowed like a funnel, but afterwards flat. There is only one known species of this genus. Tournefort, C. Bauhine, and some others, have indeed mentioned two, a larger and a smaller, but they are evidently no more than the same species in a different state.

ACETABULUM.

This elegant little plant rises with a single stalk, of the thickness of a coarse thread, and of an inch and half, or two inches in height; this is simple, unjointed, and hollow: at it's top it expands at first into a conic cavity, which by degrees enlarges till the whole plant resembles a little funnel, with a very long stem. After this the top by degrees grows more and more flat, till at length it is perfectly so; and is then nearly of the breadth of a six-pence, and as thick as a coarse paper. It is perfectly round, and has a rim of a thicker matter than the rest, running round it like a packthread; the stalk is inserted in the center of this body, and from that center to the circumference, both on the upper and under side, there run a great number of lines. The whole plant is of a greyish colour. It grows to shells, stones, and a variety of other things under water. The botanical writers in general have described it. J. Bauhine calls it, Androsace sive umbilicus marinus, and Fungus petræus marinus; Parkinson, Cotyledon marina. Any name is better for it than Androsace, because that was the name of a very different plant among the Greeks.

SUBMARINES.

Class the First. Genus the Seventh.

ORMUS.

ORMUS is a genus of Submarines, compoſed of a conſiderably hard matter, formed into ſhort and broad joints, which are faſtened in ſeveral ſeries one to another, without any pedicles, and in ſuch manner, that they reſemble a ſtring of beads in a necklace. The manner of theſe ſeveral joints growing, as it were, out of one another, has ſome ſort of reſemblance to that of the leaves of the Opuntia, whence many have called the plants of this genus Opuntioides. There are only two ſpecies of it known.

1. *Ormus ſegmentis brevibus latis.*
The broad and ſhort jointed Ormus.

This elegant and ſingular plant grows to rocks, ſtones, ſhells, or other ſubſtances at the bottom of the ſea, by a ſmall flat baſe; from this riſes a ſingle joint, which is uſually about a quarter of an inch long, and near as much in breadth at the top, but narrower at the bottom. It is flat in its whole length, but conſiderably thick; from this ſingle joint there ariſe two or three others of the ſame form, but broader a little; theſe immediately furniſh each ſeveral others, and theſe laſt ſend out others. Each of which, as the firſt, produces ſeveral more joints, all ſeeming to grow out of one another: they are faſtened to each other, without any pedicle. Four, five, ſix, or more of theſe, grow in each ſeries, ſo that, from the ſingle joint at the bottom, the plant grows to about two inches in height, and as much or more in breadth. The ſucceeding joints are ſhorter and broader than the two or three firſt; they are joined to the head of the laſt by a broad baſe, and from this extend into a ſemicircular form; they are in general ſomewhat broader than they are long, and are undulated at the extremity where they are circular. They are conſiderably thick and of a gritty ſubſtance. The whole plant is naturally of a white colour, but it is ſometimes tinged to a reddiſh, ſometimes to a greeniſh or yellowiſh hue. It grows to ſhells and ſtones at the bottom of the ſea, and is common about the ſhores of America in ſeveral places. Boerhaave calls it Opuntioides marina parva forma trichomaris; and Sir Hans Sloane, Corallina opuntioides ramulis denſioribus & foliis magis ſinuatis & corrugatis.

2. *Ormus ſegmentis rotundioribus.*
The rounder ſegmented Ormus.

This grows to four or five inches in height; it's ſegments or joints grow one out of another, in the ſame manner as thoſe of the former, but they are larger, and of a more rounded figure. They are of the ſame colour and conſiſtence, but they are leſs thick in proportion to their ſize. The whole plant is frequently of a greeniſh colour. It is found about the ſhores of the Caribbee Iſlands, and in the Eaſt Indies. Imperatus has deſcribed it under the name of Sertularia; and J. Bauhine under that of Opuntia marina.

SUBMARINES.

Class the First. Genus the Eighth.

CORALLUM.

CORALLUM is a genus of Submarines, compoſed of a hard, ſtony matter, formed into ramifications, and reſembling the trunk and branches of a tree; ſolid throughout, and not porous, ſpungy, or ſtellated on the ſurface. Often covered with a bark of a ſofter matter, which eaſily falls off; ſometimes naked.

1. *Corallium*

1. *Corallum rubrum.*
Red Coral.

This deſervedly ſtands at the head of the Coral claſs, as more beautiful aud more uſeful than them all. It grows from a broad baſe, extending itſelf over any thing ſolid, and conforming to it's ſhape; this often ſpreads to two, three inches, or more, in diameter; often it is not half an inch; it is commonly of about the thickneſs of a ſhilling, and of the ſame colour and conſiſtence with the reſt of the plant. From this riſes uſually a ſingle ſtem, ſometimes two or three grow from the different parts of the ſame baſe, and often theſe join in their growth up, and, at an inch or two diſtance from the baſe, form only one common ſtem. The thickneſs near the baſe is from that of aman's finger to near an inch in diameter, and it's height from five or ſix inches to a foot or more. The main trunk ſends off from every part conſiderably large branches, which again divide themſelves into others, and form, upon the whole, a very beautiful appearance: they ſometimes grow out irregularly, and on all ſides; ſometimes only oppoſite, or nearly ſo, to one another, and then the whole ſhrub has a flat form. The ſtem and the main branches are full of little knots and depreſſions. We meet with Coral in its ramified ſtate ſmooth on the ſurface, and of a fine red; but we are not to ſuppoſe this to be it's ſtate in the ſea. It's ſurface is deeply ſtriated naturally, and it is wholly covered with a cruſt of a fungous ſubſtance, full of an acrid milky juice, and not of the fine florid red of the Coral, but of a yellowiſh, greeniſh, or orange colour. This cruſt is covered all over with little granules, and in the center of every one of theſe there is a hole, which ſeems contrived for receiving the nutritious matter from the water. Beſide theſe granules, there are alſo other papillæ in the cruſt, which are open at the top; the opening ſometimes is ſimple, ſometimes divided into ſix parts; theſe are divided within into little cells. The internal ſurface of the cruſt is ſtriated deeply, as well as the external one of the ſtony part; and theſe ſtriæ are ſo adapted one to another, that they form ſo many tubules, running from top to bottom of the plant, and along every branch of it, in great numbers. There are cells in the ſtony internal matter, as well as in the external cruſt, and theſe, as well as the others, are filled with a whitiſh acrid liquor, and the tops of the branches have tubercles of the cortical matter, divided into ſeveral cells within, and full of the ſame milky and acrid juice. This ſpecies is found on the coaſts of the Mediterranean, and in ſeveral other places, where it is dragged up with particular engines in great abundance. It is deſcribed by all the botanical writers under the name of Corallium rubrum; and ſome of them tell us they have ſeen octopetalous radiated flowers, ſtanding in cups, ariſing from the tubercles of the bark. Red Coral is uſed in medicine as a mild aſtringent, and as an alkali and abſorbent, with good ſucceſs. The other ſpecies would probably anſwer the ſame purpoſes, but they are not uſed.

2. *Corallum album.*
White Coral.

This much reſembles the red Coral in its manner of growing, except that it is more branched. It ariſes from a broad baſe, conforming itſelf to the ſhape of the ſubſtance it grows upon, extending to two or three inches in diameter, and of the thickneſs of a coarſe paper. From this baſe there ariſes a thick and irregularly-figured ſtem, ſometimes roundiſh, often flatted and protuberant in various places. This ſometimes continues ſingle, ſometimes divides, at half an inch, or leſs, height, into two or three trunks: if there are more than one of theſe trunks, the plant is the ſmaller, but the more buſhy; if only one, which is the moſt beautiful ſtate, it riſes to ſix, eight, or ten inches high, divaricated into a multitude of branches, and each of theſe ſending off other ſmaller and ſhorter ones: the branches are round, and often meet and inoſculate with one another. The ſurface is perfectly ſmooth, not ſtriated, as that of the red Coral; and the whole plant of a beautiful white colour. When taken into the hand it is found to be vaſtly lighter than red Coral, and when broken is found of a much leſs compact and ſolid texture. It is found about the ſhores of the Mediterranean, growing to rocks, ſtones, or any thing ſolid, and is often brought up in fine pieces. Ray tells us he ſaw ſeveral fine ſhrubs of it offered to ſale at Genoa. The botanical writers have all called it Corallium album; but moſt of them have alſo deſcribed other things

under this name: the madreporæ of ſeveral kinds, in particular, are pretty currently called white Coral, and ſold for it in the ſhops.

3. *Corallum nigrum.* *Black Coral.*

The general practice of receiving the madreporæ into the ſhops under the name of white Coral, and of receiving alſo the ceratophyta under the name of black Coral, has taught many people to believe that there was not, in reality, any ſuch thing as either white Coral or black Coral in the world; but people who have examined into things more deeply find it otherwiſe: black Coral is indeed too ſcarce, and too much out of uſe in medicine, to be expected in the ſhops at this time; but ſpecimens of it are frequent in the cabinets in Italy and Germany, and tolerably handſome plants of it are at times drawn up among the red.

The genuine black Coral grows to rocks, and other ſolid bodies, by a broad and thick baſe; from this it riſes up uſually in a ſingle ſtem, of the thickneſs of a man's finger; this runs up ſingle for three inches, or thereabout, and then ſends off a branch, and uſually three or four more, at different diſtances, higher up: theſe do not often ſend out other branches, but run ſingle their whole length, which is often two inches, or more. The whole ſurface of this Coral is naturally ſtriated, but this is uſually poliſhed off, before it is offered to ſale. It is as heavy and as hard as the red Coral, and is of a fine ſhining black colour. When broken it appears of as compact a texture as the red. It is ſometimes dragged up on the coaſts of the Mediterranean; we ſometimes alſo meet with fragments of it among the ſea plants ſent over for ſale. Ray tells us he often met with it among the Italian naturaliſts; and the king of Pruſſia, we are told, at this time has a fine ſhrub of it: Boerhaave alſo gives us an account of a ſpecimen he had of it, which is ſtill at Leyden.

4. *Corallum album geniculatum.* *Geniculated white Coral.*

This riſes from a broad and irregular baſe, conſiderably thick, and of a white colour. The ſtem is uſually ſingle at the baſe, and divides afterwards into ſeveral branches: the main ſtalk is uſually of the thickneſs of a man's thumb, or more, and the height of the whole plant not leſs than a foot and a half. Its branches are compoſed of oblong ſegments, or joints, half an inch or more in length, ſo that they repreſent the ſtock of the common horſe-tail. The whole plant is of a yellowiſh-white colour, ſtriated on the ſurface, and of a tolerably ſolid texture, between that of the madreporæ and that of the common white Coral.

This is found on the ſhores of the Eaſt Indies. Boerhaave calls it Corallium album geniculatum; and Cluſius, Hippuris ſaxea.

The Corals are ſo much alike in their growth, that the other ſpecies, after the deſcriptions of theſe, will eaſily be known by their names. They are, 1. The little, white Coral, brittle and ramoſe. 2. The thin, branched, brachiated, white Coral. 3. The browniſh-grey Coral of Spain, 4. The thin, brittle, tufted, white Coral. 5. The ſlender, very-much branched, little Coral. 6. The white, digitated, flat-branched Coral. 7. The great yellowiſh Coral. 8. The great, white, ramoſe Coral, with red tops. 9. The brittle, very ramoſe, yellowiſh Coral. 10. The little, moſſy, brittle, white Coral, growing in thick tufts. 11. The little, geniculated, white Coral, with white, multifid tops. 12. The white, capillaceous, geniculated Coral, with branched tops. 13. The capillaceous, pale-red, geniculated Coral, with branched tops. 14. The red, geniculated Coral, with capillaceous branches and ramoſe tops. The four laſt are very ſmall, but very beautiful Corals. Authors have deſcribed many more ſpecies under the name of Corals, as the ſtellate and oculated Corals, ſo called from the figures of ſtars and eyes on their ſurfaces; but theſe are properly madreporæ, and have been already deſcribed under that genus,

SUBMARINES.

Claſs the Firſt. Genus the Ninth.

CORALLINA.

CORALLINA is a genus of Submarines, conſiſting of ſtalks and branches, often beautifully ramified, and compoſed of joints of an oblong figure, inſerted into one another. The greater part of theſe are gritty, and of a Coral-like matter, but nature varies from this in ſome of the ſpecies, which are of a ſofter ſubſtance.

1. *Corallina ſegmentis longioribus.*
Coralline with long ſegments.

This is a buſhy plant, much divided in it's branches, and uſually growing in great cluſters together. It riſes to two or three inches in height, and often extends to as much in diameter in the whole cluſter. The main ſtalk is of the thickneſs of a ſmall pack-thread, and is compoſed of a multitude of joints or ſegments, which are twice as long as they are thick, and are all regularly figured, being thicker at one end, and ſmaller at the other: the ſmaller end grows downwards, and is inſerted into the larger end of the joint below; ſo that the whole plant conſiſts as it were, of a ſeries of cups, with narrow mouths, and narrower bottoms, inſerted into one another. There grow many branches from the main ſtock, and theſe are ſometimes ramified again, but they are always ſhort. The whole plant is ſometimes of a white, ſometimes of a greyiſh, and ſometimes of a greeniſh, reddiſh, or yellowiſh colour. It conſiſts of a gritty matter, and is eaſily rubbed to powder: it's taſte is very nauſeous. It grows to ſtones, ſhells, and all other ſolid ſubſtances, under water, and uſually in thick tufts, or cluſters. Cæſalpinus ſays it is ſoft, while in the water, and grows ſtony on being expoſed to the air; but he errs in this. It is common about our own coaſts. Authors have called it Corallina Anglica, and Corallina officinarum. It has been long celebrated for its virtue againſt worms, and is given, from ten grains to two ſcruples for a doſe, with very good ſucceſs.

2. *Corallina pennata denticulata.*
The pennated and denticulated Coralline.

This is a very beautiful and regular little plant. It grows to the height of two or three inches, and it's utmoſt breadth is about three quarters of an inch. It riſes with a ſingle ſtem or ſtalk, which continues undivided to the top, and from which there iſſue a number of branches, diſpoſed in a very regular order: they are ſingle, and the longeſt are ſomewhat more than a third of an inch long; theſe are in the middle of the plant, and from this they are gradually ſhorter to the bottom, and to the top they are placed in the ſame plane oppoſite to one another, or nearly ſo, ſo that the whole plant has much the appearance of ſome of the pennated leaves. The main ſtalk and the branches are all of the ſame ſtructure, compoſed of ſhort joints, and thoſe diſpoſed in ſuch a manner, that the branches appear denticulated. The whole plant is very rigid, and of a pale-brown colour. It grows from a ſmall, flat baſe, and uſually ſingle. It is frequent about our own coaſts, growing on ſmall ſtones, and often on oyſter-ſhells. Authors have ſuppoſed it to reſemble the fir-tree in it's regular growth, and have thence called it Abies marina Belgica. Tournefort calls it Corallina marina abietis forma; and C. Bauhine, Muſcus marinus filicis folio.

3. *Corallina ramulis falcatis.*
The falcated Coralline.

This is an extreamly elegant little plant: it riſes to four or five inches height, but it's ſtalk is ſo weak that it is ſcarce able to ſupport itſelf erect at that height. It uſually grows ſingle, and is branched from top to bottom. The main ſtalk ſends out a branch or two every half inch, or at nearer diſtances; and theſe ramify into a multitude of others, which are all much of the ſame length, and all of them bend at their ends in ſuch

ſuch manner as to reſemble a reaper's ſickle. The main ſtalk is rigid and firm, though very ſlender; the branches are compoſed of ſhort joints, ſo diſpoſed, as to give the whole a denticulated figure, and in the alæ of the denticulations there are frequently found a kind of oval bodies, hollow, and ſtriated tranſverſely; the ſame ſort of capſules are alſo found on many of the other ſpecies, but their uſe is not yet diſcovered. The whole plant is of a pale-brown colour. It grows to oyſter-ſhells, and other marine bodies, ſometimes to the other ſea-plants, and is common about our own coaſts. Plukenet calls it Corallina muſcoſa pennata ramulis et capillamentis falcatis; and Johnſon, Muſcus marinus pennatus.

4. *Corallina ſimplex cirrata.*
Simple cirrated Coralline.

This is a very ſingular ſpecies: it conſiſts of a ſingle ſtalk, of three, four, or more inches in length, neither divided, nor ſending out any branches, but continuing ſimple from the baſe to the ſummit. It is compoſed of a multitude of ſhort, cylindric joints, and at the head of every joint it has five little cirri, looking like the rudiments of hairs. The ſtalk itſelf is not larger than a thick horſe-hair, and is ſomewhat rigid, and of a brown colour. There generally grow a great multitude together, ſo that they ſupport one another, but, otherwiſe, their length is almoſt too much for their diameter. The ſtalk has a cavity running all the way up it, and in the whole reſembles nothing ſo much as the horn of a lobſter, whence it has been called, by the generality of writers, Corallina aſtaci corniculorum æmula. It is frequent on our own coaſts, and ſometimes found on oyſter-ſhells, as many other of the Corallines are.

After the deſcription of theſe four ſpecies, the names alone will be ſufficient to diſtinguiſh the others. They are, 1. The ſmall-branched Coralline, with round capſules at the indentings. 2. The ſmall, ſnow-white, branched Coralline. 3. The capillaceous, multifid Coralline, called the Fine-haired ſea-moſs. 4. The tall, white, capillaceous, leaved Coralline. 5. The round-jointed, ſoft, branched Coralline. 6. The purple, compreſſed Coralline. 7. The branched, cirrated Coralline. 8. The broad, denticulated Coralline. 9. The branched Coralline, with the denticles in two rows, turned the ſame way. 10. The thick-ſtalked coarſe Coralline. 11 The erect, very-much branched, ſilvery Coralline. 12. The procumbent, denticulated, branched Coralline. 13. The little, creeping, denticulated Coralline. 14. The dwarf, erect, ramoſe, denticulated Coralline. 15. The ſimple-denticulated Coralline. 16. The hollow-jointed Coralline. 17. The capillary, hollow-jointed Coralline. 18. The threaded, ſhort-jointed, hollow Coralline. 19. The purple, narrow-leaved Coralline. 20. The black, multifid Coralline. 21. The green, multifid Coralline: both theſe become white with lying on the ſhores, but they even then are evidently different from any other ſpecies. 22. The dodder Coralline. 23. The abrotanum, leaved Coralline. 24. The elegant, ſilvery, fine-divided Coralline.

Linnæus has figured many of theſe Corallines under the name of receptacles of inſects, and ſuppoſes them not of vegetable origin. The French have lately, alſo, extended this doctrine to the corals, and many other of the ſea-plants, all of which they make not to be vegetables, but caſes made by inſects. We do not find this, however, ſufficiently proved at preſent, to authoriſe the throwing this ſet of bodies out of the vegetable world. In a work where a general hiſtory of plants is to be compriſed in a ſmall volume, we have no room for controverſy; but this is certain, that many of the ſpecies, called by theſe authors the caſes made by inſects, may be proved to be vegetables, as much as daiſies or lillies are ſo. We allow that ſome inaccurate authors may have deſcribed caſes of inſects under the name of plants, and that ſea inſects may inhabit ſea-plants, as the hexapodes of beetles, &c. do trees, or other inſects (the mineurs de feuilles of Reaumur, &c.) do plants: but we are not, therefore, for ſuppoſing all ſea-plants to be caſes of inſects, nor all of them even to afford niduſes for animals, becauſe ſome of them do ſo.

SUBMARINES.

Claſs the Firſt. Genus the Tenth.

ALCYONIUM.

ALCYONIUM is a genus of Submarines, conſiſting of a rigid, fibroſe matter, diſpoſed in various forms, but always laid together in a lax manner, ſo as to be in moſt ſpecies compreſſible. Sometimes covered with a cruſt of it's own matter, more cloſely arranged, and forming a hard coat for the reſt, but more often naked; and in ſome of the ſpecies, the leaſt reſembling a plant of any thing of the Submarine claſs, in it's external appearance. There is no term in botany that has been more abuſed, or employed in ſo many improper ſenſes, as this Alcyonium. Authors have deſcribed many things which are not diſtinct vegetables under it; ſome of them really niduſes of inſects, ſome of them only congeries of the fibrous matter of other plants. We are not for this reaſon however to conclude, that there are no Alcyonia truly vegetable, of diſtinct and determinate kinds.

1. *Alcyonium divaricatum.*
Divaricated Alcyonium.

This grows to the rocks or other ſolid bodies under water, by a broad and thick baſe, compoſed of a multitude of fibres variouſly interwoven and entangled. From this baſe there ariſe two or three branches, each ſpreading out into ſeveral ramifications; the whole branches are often eight or ten inches long. It is rounded at the bottom, and an inch and half or more in diameter; but, as it branches out, it becomes flat; many of the ramifications are two inches broad, and not half an inch thick, and the whole has ſomething of the rude figure of an elk's-horn. It is of a brown colour, and of a ſomewhat rigid, yet compreſſible matter, and is all formed, like the baſe, of a number of thready filaments, ſtrangely interwoven and entangled, and often coaleſcing together; the ramifications from the main branch often coaleſce where they meet. The conſtituent matter ſeems ſomething of a middle nature, between that of the Eſcharæ, and that of the Spunges.

This ſpecies is not uncommon on the coaſts of America. Cluſius calls it Alcyonium monſtroſum; and C. Bauhine, Alcyonium cervi cornua referens.

2. *Alcyonium coralliforme.*
Coral-like Alcyonium.

This is an extreamly elegant and beautiful plant, and is the moſt ſingular in its appearance of any thing of this kind; at a diſtance it perfectly reſembles a ſhrub of coral, but that it is of a yellowiſh colour; but, when examined, it is found to be compoſed merely of fibrous and ramoſe capillaments, wonderfully arranged into that general form, and is ſo extreamly light, that the largeſt pieces of it have ſcarce any ſenſible weight in the hand. It riſes from a thick and coarſe baſe, formed of a multitude of fibres, ſtrangely entangled together and extending themſelves, in a cake of ſeveral inches diameter, over ſtones or rocks; from this it riſes with a main trunk of an inch or two in diameter, and this divides into ſeveral ramifications, each of which afterwards ſends off its ſeveral branches. Theſe are all round in figure, though compoſed only of fibres ſtanding at a conſiderable diſtance from one another, and ſo remarkably arranged and terminated, that they all end in the circular circumference allotted to the branches. The whole plant is of a yellow colour, and the branches are ſomewhat compreſſible, though the fibres they are compoſed of are conſiderably rigid. It is frequent on the coaſts of the Eaſt Indies, where it is thrown up by the waves. It naturally grows under twenty or thirty feet water. Many of our collectors of natural bodies have it in their muſæums, where they call it the wire ſpunge, or ſpunge coral.

3. *Alcyonium rotundum cavum.*
Round hollow Alcyonium.

This is a very ſingular ſpecies, tho' leſs beautiful than the two former. It grows to the rocks by a circular rim, ſurrounded with a multitude of fibres. The rim is about an eighth of an inch broad; the circle it makes is often three quarters of an inch in diameter, and the internal ſpace has no part of the plant annexed to it. From this circular baſe the plant extends itſelf to the bigneſs of a man's fiſt, but the hollow ſtill continues. The whole conſiſts only of a cruſt of a ſixth of an inch, or thereabout, in thickneſs, which is compoſed of rigid fibres, ariſing from the circular baſe, and running through the whole plant, variouſly entangled with one another, and frequently meeting and coaleſcing together; theſe fibres are ſo numerous, and ſo well connected by their inoſculations, that they form a continuous ſubſtance cloſe toward the ſurface, but more lax within, and of a middle degree of denſity between the two ſpecies already deſcribed. The cavity contained within this globular caſe is large, and is always full of ſea-water. The plant is ſometimes of a greeniſh, but more uſually of a browniſh yellow colour; but it grows white, on being beat about on the ſhore. Imperatus deſcribes this under the name of Aurantium marinum; others call it Burſa marina, and Pannum marinum. It is frequent about the coaſts of the Mediterranean.

4. *Alcyonium ovatum cortice duriori.*
The oval Alcyoninm with a hard coat.

This ſpecies ſomewhat reſembles the former in ſhape, but it differs greatly in it's ſtructure. It riſes from a circular baſe, and uſually there grows from this a cylindric neck, ſhort and thick, which from it's top expands into an oval figure. The whole plant, as in the former ſpecies, is compoſed of rigid fibres, variouſly entangled one with another, but they are laid leſs cloſe together. The ſurface is covered with a kind of bark, formed of the ſame fibres, more cloſely interwoven, and frequently inoſculating and cohering one with another. This cruſt is but thin, but all there is of the fibrous ſubſtance, that compoſes the plant, is propagated from it toward the center. The colour of the whole is a browniſh grey, it's ſize very uncertain. I have ſeen maſſes of it twice as big as a man's head, but the bigneſs of an orange is it's more uſual ſize. It is often thrown up on the coaſts of Italy. It ſometimes grows to ſtones, ſometimes to other ſea plants. Imperatus has deſcribed it under the name of Alcyonium tuberoſum; and C. Bauhine under that of Alcyonium forma alicujus ficus.

The other ſpecies of the Alcyonium, properly ſo called, will be underſtood ſufficiently by their names, after theſe deſcriptions of the more ſingular ones. They are, 1. The harder, ſpongious, and porous tuberous Alcyonium. 2. The funnel-ſhaped Alcyonium. 3. The ſoft branched Alcyonium. 4. The great, hard, arboreſcent Alcyonium. 5. The yellowiſh, ramoſe, and ſofter Alcyonium. 6. The ramoſe ſcabrous Alcyonium.

SUBMARINES.

Claſs the Second. Genus the Firſt.
Thoſe of a firm texture, tough and elaſtic.

CAMPYLIUM.

CAMPYLIUM is a genus of Submarines, conſiſting of a tough, flexible matter, uſually formed into a kind of ſhrubby appearance, and covered with a hard or gritty cruſt, in which the fructification ſeems to be placed in little granules with open tops. The Campylia agree with the corals, in the having this kind of cruſt for this purpoſe; they differ from them in their wanting the ſtony hardneſs, which characteriſes the others. The botanical writers in general have agreed to arrange theſe plants into a genus by themſelves, but they have called them by generical names, not properly expreſſive of them. Tournefort calls them, Lithophyta, or ſtony plants, a name

name that any body will perceive belongs not properly to them, but to the corals. Linnæus calls them Lithoxyla, expreſſing them to be partly of a woody, partly of a ſtony nature; and Boerhaave, according to the hardneſs of their cruſts, arranges them into two genera, under the names of Ceratophyta and Titanoceratophyta. As what has been meant to be expreſſed by theſe generical names, has been principally the flexile texture of the plants, which ſome have expreſſed by reſembling it to that of horn, others to that of wood, neither of which ſubſtances the plants themſelves truly reſemble; it ſeems more proper to call them by a name which expreſſes only their being flexile, without conveying an idea of a reſemblance which does not exiſt. Linnæus ſeems not to have been aware, that his generical character of the Lithoxyla took in the corals, which he afterwards makes another genus.

1. *Campylium coralliforme.*
Coral-like Campylium.

This is the plant which we uſually meet with, under the name of black coral. It grows from a flat baſe, of the thickneſs of a ſhilling, which extends itſelf for two or three inches over the rocks, and aſſumes the form of the part of them it grows on. From this baſe there uſually riſes a ſingle ſtem, ſometimes more, of the thickneſs of a man's little finger. This runs up ſingle three or four inches, and then begins to divaricate and ſend off branches. The height of the whole plant is from eight inches to a foot or more, its branches ſeldom ſend out any other ſmaller ones; ſo that the whole repreſents very well a ſhrub of red coral, except that it is leſs thick in proportion to it's height. It's colour is a dark brown, approaching to black; it's ſurface is not perfectly ſmooth: it is extreamly flexile, indeed it will not be broken without conſiderable difficulty. It is frequently found in this naked ſtate, but, where perfect, it has a whitiſh cruſt, friable, and compoſed of a gritty matter extended over it's ſurface; this is of the thickneſs of a ſhilling or more, and is beautifully marked with cavities and openings. Moſt of the botanical writers have deſcribed this ſpecies. Tournefort calls it, Lithophyton nigrum arboreum; and others, Corallium nigrum, and Antipathes. It is common about the ſhores of the Bermudas, and in many other places.

2. *Campylium ramoſiſſimum fruticiforme.*
The ſhrub-like extreamly branched Campylium

This is an extreamly elegant plant. It grows to three or four feet high, and extends its branches to more than that meaſure in diameter. It riſes from a broad and thick baſe, affixed to ſome rock or large ſtone, and conforming itſelf to its ſhape. From this there grows a ſtem or trunk of an inch and half or more in diameter; this riſes ſingle to the height of four or five inches, and then it begins to ſend out branches from ſpace to ſpace on every ſide; the largeſt of theſe are ſometimes as thick as a man's thumb at the baſe, and a foot and half or more in length: theſe branches ſend off others, and thoſe ſtill ſend out more, ſo that the whole plant looks extreamly buſhy; the extremities of all the branches are long and ſlender filaments. While the plant is in the water, theſe extend themſelves every way, and make a very beautiful appearance; but, when taken out, they droop with their own weight. The plant is of a tough, flexile matter, like the others of this claſs, and is, when perfect, covered with a cruſt, formed of a gritty matter, like that of the others, but of a very beautiful red colour, ſo that it adds greatly to the beauty of the plant. It grows about the Cape of Good Hope, near the iſland of Ceylon, and in ſome parts of the American ſeas. Moſt of the botanical writers have deſcribed it. Cluſius calls it, Frutex marinus elegantiſſimus; and C. Bauhine, Corallina cortice reticulato purpuraſcente.

3. *Campylium ramoſum reticulare.*
Branched reticulated Campylium.

This is another elegant ſpecies, very ſingular in its manner of growing. It riſes from a large, flat, and very thick baſe. It's trunk is an inch or two in diameter. It is ſingle to about five or ſix inches in height, but there divaricates into two branches, which ſoon after divide again, and ſend out a vaſt number of ſmaller ramifications.

cations. The plant grows to three or four feet high, and is very ſingular in this, that the branches do not go off every way from it, but all ſtand in the ſame plane, ſo as to make it quite flat and thin, though extended to a great breadth. The ſmaller ramifications are extreamly numerous, and ſtand very cloſe; they meet continually, and, wherever they do ſo, they inoſculate with one another, ſo as to form in the whole a kind of net-work, with holes or meſhes of different ſize. The plant is compoſed of a tough, firm, and flexile matter, and is covered with a beautiful purpliſh cruſt of a gritty ſubſtance, with a multitude of papillæ and holes in it. The extremities of the ramifications are extreamly fine and ſlender. This ſpecies is frequent about the ſhores of the iſland of Ceylon, and in many parts of the Eaſt. The hard cruſt eaſily breaks off from this as well as the other ſpecies of this genus, ſo that we frequently meet with them either in part or entirely naked. Moſt of the botanical writers have deſcribed it. Cluſius calls it, Planta marina retiformis; and Tournefort, Lithophytum reticulatum aliud purpuraſcens.

After the deſcriptions of theſe, which are the moſt ſingular ſpecies of the Campylia, the others will be eaſily diſtinguiſhed merely by their names: They are, 1. The branched Campylium, with a white cruſt. 2. The leſs branched Campylium, with a purple cruſt. 3. The ſmaller Campylium, with a yellow, punctated cruſt. 4. The nodoſe Campylium, with a white cruſt. 5. The grey rugoſe Campylium, with a warty cruſt. 6. The branched Campylium, with a thin, ſmooth, yellow cruſt. 7. The great ramoſe Campylium, with a grey cruſt. 8. The great Campylium, with a blackiſh nodoſe cruſt. 9. The polypody-like Campylium, with a white cruſt. 10. The flat branched Campylium, with a greyiſh cruſt. 11. The black hairy Campylium. 12. The whitiſh hairy Campylium. 13. The convoluted, black, ſetaceous Campylium. 14. The thick-branched, variegated, white and yellow cruſted Campylium. 15. The erect, ramoſe, tamariſk-like Campylium. 16. The nodoſe and corniculate Campylium. 17. The prickly fennel-like Campylium. 18. The flat-branched reticulated Campylium. 19. The abrotanum leaved white cruſted Campylium. 20. The cypreſs-like Campylium. 21. The ſlender branched Campylium, with a red and yellow cruſt.

SUBMARINES.

Claſs the Second. Genus the Second.

SPONGIA.

SPONGIA is a genus of Submarines, conſiſting of a ſoft, tough, and elaſtic matter, formed uſually into rude maſſes of a cavernous ſtructure, and having very little of the appearance of plants.

Upon a nice examination, theſe plants appear to be compoſed of capillary fibres, which are hollow, and are implicated in an amazing manner, and ſurrounded by thin membranes, which arrange them into a cellular form. The ſtructure and conſtituent matter of the ſpunge renders it the fitteſt of all bodies to imbibe a great quantity of any fluid, and on a ſtrong preſſure to part with almoſt the whole quantity again.

1. *Spongia cellulis majuſculis.*
Spunge with moderately large holes.

This is the ſpunge in common uſe with us on many occaſions. It is a mere ſhapeleſs maſs, growing under water: it is affixed to the rocks by a broad and firm baſe, and thence expands itſelf every way into a large and thick irregular lump, conſiſting of a tough matter, arranged into large pores. Its colour is a pale brown. It is frequent on the coaſts of the Mediterranean, and in many other places; and, wherever it lies ſo that it can be eaſily come at, is taken up, and proves a very profitable branch of commerce. Tournefort calls this ſpecies Spongia ad uſum præſtantiſſima foraminibus exiguis; but there are other ſpecies, the foramina of which are ſmaller.

2. *Spongia*

2. *Spongia cellulis maximis.*
Spunge with large cavities.

This is diſtinguiſhable from the former ſpecies, as well by the largeneſs of it's cells, as by it's general appearance. The former is uſually found in maſſes as thick as they are long; this, on the contrary, is almoſt always met with in flat or hollowed pieces: it uſually adheres to the rocks by a broad baſe, from whence it expands every way in a circular, or leſs regular form, to the extent of a foot or two in diameter, and with three or four inches of thickneſs: It frequently is met with ſmaller than this, ſometimes much larger. It ſometimes expands itſelf quite flat, ſometimes it is umbilicated, riſing every way from the root, ſo as to form a kind of baſon; and ſometimes the baſe riſes to an inch or more in height, and the body of the ſpunge thence expands itſelf into a hollow form, largeſt at top, and ſmaller at bottom: in whichever of theſe ſtates it is found, it's holes are always much larger than thoſe of the other, and it's ſubſtance coarſer. Authors have made three ſpecies of it in it's three principal varieties of form: when quite flat, it is the Spongia compreſſa magna of Bauhine, &c. when in it's hollow form, without a pedicle, it is the Spongia ingens anomala pelvim referens of Boerhaave; and, when hollow with a pedicle, it is the Spongia infundibuliformis of Cluſius, and of almoſt all the authors ſince his time.

It is frequent in all theſe appearances about the Cape of Good-Hope, and in ſome of the ſeas nearer home: it is often brought to us inſtead of the firſt kind, but it is not nearly ſo good.

3. *Spongia cellulis minimis ramoſa.*
Branched Spunge with very ſmall cellules.

This is of a very different appearance from either of the former; it is long, and divided into branches. It uſually grows to ſome ſtone by a firm and not very broad baſe, from which it riſes with two or three branches, of the thickneſs of a finger; theſe each of them divide into ſeveral others, and thoſe are ſometimes branched again: the ſeveral ramifications are roundiſh, but ſomewhat flatted; they are of the ſame ſubſtance with the other Spunges, but more denſely put together, and the cavities much ſmaller. The colour is a pale brown. The length of the whole plant is often ten or twelve inches. It grows on rocks about the ſhores of Italy, and in many other places. Tournefort, and others, have deſcribed it under the name of Spongia ramoſa; Lobel calls it Confervæ marinæ genus.

This ſpecies ſometimes grows ſingle, not branched, and extends to a great length. In this ſtate Plumier has deſcribed it under the name of Spongia Americana longiſſima funiculo ſimilis; and in like manner the firſt ſpecies, in it's ſeveral variety of ſhapes, has been deſcribed as ſeveral ſpecies, under the names of Spongia tubo ſimilis, Spongia favo ſimilis, Spongia globoſa, and the like.

The ſpecies of Spunge have, indeed, been increaſed beyond all bounds by the error of taking varieties for diſtinct kinds: the only real diſtinct ſpecies beſide thoſe already deſcribed are, 1. The ſhrubby, branched Sponge, with moderately large holes. 2. The branched, river Spunge. 3. The hairy Spunge; and, 4. The woolly Spunge.

SUBMARINES.

Claſs the Second. Genus the Third.

FUCUS.

FUCUS is a genus of Submarines, conſiſting of a tough matter, formed into a kind of leaves, which are flat, and are variouſly divaricated, ſometimes dichotomouſly, ſometimes perfectly irregularly; and which have ſome appearance of fructification, in punctuated tubercles, covering oblong veſicles, taken by Linnæus to be male flowers; and ſmooth, roundiſh veſicles, hollow, and interwoven with filaments, which appear to him to be female flowers. Mr de Reaumur has the honour of being the diſcoverer of this fructification, which Linnæus has from him, and does him due honour for, but there require further obſervations to confirm it.

1. *Fucus latifolia ſerrata.*
Broad-leaved, ſerrated Fucus.

This is the moſt common of all the ſpecies with us: it grows to the height of ſix or eight inches, ſometimes more, and it's leaves are near half an inch in breadth. It riſes immediately in form of the leaf, without any pedicle, and of the breadth of a finger; as this leaf riſes in height, it divaricates into two parts, and each of theſe into two more, and ſo on, till a great number of ramifications are produced, and all of them dichotomouſly, or by pairs. The whole plant is ſerrated at the edges, and is of a duſky-browniſh colour, very tough and ſmooth on the ſurface. It's extremities frequently ſwell out into a ſort of pods, rough on the outſide, and of an oblong figure; and, beſide theſe, it has a number of air-bladders, of a round figure, growing on the ſurface of the leaves, which burſt with a noiſe on being trod upon.

It grows with us on all the coaſts in vaſt abundance, covering moſt of the ſtones that chance to lie on the ſhore. The botanical writers have deſcribed it under the name of Quercus marina vulgaris, Alga vulgaris, and Fucus. It differs conſiderably in its form, according to the depth of water, and other circumſtances, and has, in theſe ſeveral ſtates, been deſcribed under the names of ſeveral different ſpecies. Dillenius has enumerated ten or a dozen of theſe varieties, deſcribed by others under the name of different ſpecies, in his edition of Ray's Synopſis.

2. *Fucus tenuifolia dentata.*
Narrow-leaved, dentated Fucus.

This is a much more beautiful plant than the former. It riſes from a flat baſe, affixed to rocks or ſtones, with two or three, ſometimes more, long and narrow leaves. It grows to twelve or fifteen inches in length, and is of a deep brown colour. It's firſt ſhoot is ſtrait, and of the breadth of a ſtraw; this ſoon divides, into ſeveral ramifications, and theſe ſubdivide again and again into ſeveral others; none of them are broader than the firſt, and they are all very ſharply indented about the edges, the points made by the indenting terminating in a kind of weak thorns.

This ſpecies is frequent about our own ſhores. Ray deſcribes it under the name of Fucus tenuifolia foliis dentatis. It ſometimes ſwells into the ſame kind of veſicles at the end of the ramifications with the former, but more rarely.

3. *Fucus lato et tenui folio.*
The broad and thin-leaved Fucus.

This is a very elegant, but a very irregular ſpecies in it's manner of growing. It riſes from a flat baſe, with a narrow and thin leaf; this grows wider, as it extends in length, and ſoon begins to divaricate into ſeveral parts, but that not in a dichotomous manner. It grows to four or five inches in height; the ſegments toward the end are narrow, and ſometimes, though rarely, they are formed into a kind of pods, like thoſe of the common Fucus. The whole plant is of a tenderer texture than moſt of the Fuci, and is ſometimes of a purpliſh, ſometimes of a greeniſh, and ſometimes of a whitiſh colour. It varies ſo much in it's manner of growing, that it has been often miſtaken in it's ſeveral ſtates for different ſpecies. It is common about our own ſhores. Ray calls it Fucus membranaceus ceranoides varie diſſectus, others, Fucus latifolius.

The other ſpecies of Fucus are very numerous in nature, and much more ſo in the writings of authors, a great many of them, in their ſeveral varieties, having been deſcribed as diſtinct ſpecies. There is ſo much ſimilarity in the general form and texture of theſe plants, however, that the other real ſpecies will eaſily be diſtinguiſhed by their names. The more ſingular and more certainly diſtinct are, 1. The purple, narrow Fucus, called by the Iriſh duleſh, and eaten as a remedy againſt worms. 2. The grey, narrow-leaved Fucus. 3. The fine-divided and variegated Fucus of the Cape of Good Hope. 4. The peacock-feathered Fucus. 5. The curled, variegated Fucus. 6. The long, narrow, and thick-leaved Fucus. 7. The narrow-leaved, round veſicled Fucus, called the ſea-lentil. 8. The narrow-leaved Fucus, with long veſicles. 9. The heath-leaved Fucus. 10. The red-rattle-leaved Fucus. 11. The fœniculaceous Fucus. 12. The abrotanum-leaved Fucus. 13. The ſpongious and nodoſe Fucus. 14. The narrow-

narrow-leaved ſpiral or twiſted Fucus. 15. The broader-leaved, larger, ſpiral Fucus. 16. The dwarf, broad-leaved, ſerrated Fucus. 17. The long, narrow, and thick-leaved Fucus. 18. The ſmall, membranaceous, greeniſh Fucus, with extremly divaricated extremities. 19. The purple, membranaceous coſtated Fucus. 20. The tender, graſs-leaved, dichotomous Fucus. 21. The coronopus-leaved Fucus. 22. The broad, Scotch, eſculent Fucus. 23. The purple Fucus, with ligulated edges. 24. The broad-leaved, pinnated Fucus. 25. The elegantly-divided Fucus, with broader ſegments. 26. The ſcarlet, pennated, and variouſly-divided Fucus. 27. The purple, plumoſe Fucus. 28. The dodder-like Fucus. 29. The ſimple, long, and broad-leaved Fucus, called the ſea-beet. 30. The thick, long, and broad-leaved Fucus. 31. The Fucus with a leaf like the lepathum ſanguineum. 32. The hart'stongue-leaved Fucus. 33. The ſimple, long, broad, and very thin-leaved Fucus; and, 34. The variouſly-divided, long-leaved Fucus.

SUBMARINES.

Claſs the Third. Genus the Second.

STRONGYLIUM.

STRONGYLIUM is a genus of Submarines, conſiſting of the ſame tough and firm matter with the Fucus, but formed into branches and ramifications of a rounded, not of a flat figure. There has not been any part of fructification ever yet obſerved in any of theſe plants. They have been uſed to be confounded with the Fucus, and called Fuci cauliculis teretibus; but this has occaſioned great miſtakes in ſome writers, and the repetition of many unneceſſary words in others.

1. *Strongylium ſimplex cavum.*
The ſimple, hollow Strongylium.

This is a very ſingular plant: it conſiſts only of a long and ſlender cylindric body, reſembling a packthread. It riſes from a ſmall, flat baſe, and is thiner near the baſe than in the middle, and grows thiner again as it approaches the other extremity. It's greateſt thickneſs ſeldom exceeds an eighth of an inch in diameter, but it's length is often two or three yards. It is hollow within, and full of ſea-water, and there are many membranaceous diviſions placed acroſs the cavity, and forming it into a number of cells. Its colour is a dark-brown, its ſubſtance that of the tenderer of the Fuci. It is found on our own ſhores, growing to little ſtones. C. Bauhine calls it Alga nigro capillaceo folio; and Boerhaave, Filum marinum Germanicum. Ray calls it Fucus chordam referens, teres, prælongus; but it is very evident that it has nothing of the ſtructure of the Fucus, nor any thing of the appearance they carry of fructification.

2. *Strongylium ramoſum, dichotomum, craſſum.*
Thick-branched, dichotomous Strongylium.

This is a very ſingular little plant. It grows to three or four inches high, and extends its ramifications to as much or more in diameter. It riſes from a broad, flat baſe, affixed to ſome ſhell or pebble; from this there grow three or four ſtalks, round, of a blackiſh colour, and as thick as a ſmall packthread; each of theſe ſoon divides into two parts, and each of thoſe diviſions divide, and ſubdivide again, but always in the dichotomous manner, till of the whole there is formed a thick cluſter; the branches grow ſmaller all the way, and their ſegments, toward the extremities, are ſhort, and terminate in points: this gives them an odd, forked look. The whole plant is very firm and tough, and is not eaſily pulled up from its baſe. It is very frequent about our own ſhores. J. Bauhine calls it Fucus marinus forcatellæ lumbricalis ſpecies; and Ray, Fucus parvus ſegmentis prælongis, teretibus, acutis.

3. *Strongylium tenue dichotomum.*
Thin, dichotomous Strongylium.

This is a very elegant little plant. It grows from a ſmall, flat baſe; fixed to a ſhell, pebble, or other ſolid body; from this it uſually riſes with a ſingle ſtalk, which is of the

the thickneſs of a large horſe-hair; this is divided into two parts ſoon after it riſes from the baſe, and each of theſe are divided again, and their diviſions ſtill further divaricated, always in the dichotomous order. The whole plant is of a pale yellow colour, and of a tough texture. It grows to about three inches in height, and, what is ſingular, its branches are all the way of the ſame thickneſs to the top. It is frequent about our own ſhores: I have met with it abundantly on the Bognor Rocks in Suſſex. Plukenet calls it Fucus trichoides noſtras aurei coloris ramulorum apicibus furcatis.

The other ſpecies of Strongylium are, 1. The ſmall Strongylium, with long, bifid, or trifid extremities. 2. The thick, hairy Strongylium. 3. The ſimple, erect, and ſhort Strongylium: This grows to about an inch in height, and is thickeſt at the baſe, and ſmalleſt at the top. 4. The wind-pipe Strongylium; and 5. A large and beautiful Strongylium, with very long, bifiid extremities. This laſt grows to two feet, or more, in length, and is of Eaſt-Indian origin.

SUBMARINES.

Order the Third. Genus the Third.

ALGA.

ALGA is a genus of Submarines, compoſed of a tender and herbaceous matter, formed into long, ſlender, and undivided leaves, reſembling thoſe of graſs.

1. *Alga longiſſimo anguſto folio.*
The long and narrow-leaved Alga.

This is a very ſingular plant, and has greatly the appearance of ſome kind of graſs. Its baſe is a hard, woody, thick, and oblong body, reſembling a large root. This creeps along the bottom till it often extends to ſeveral yards in length, and is covered, in many places, with a number of filaments, which are the remains of decayed leaves. At different diſtances there ariſe from this root cluſters of leaves, ten, twenty, or more together; they grow from a kind of bulb, or tuberoſity, formed of the rotting baſes of other leaves, and extend themſelves to four feet, or more, in length, though ſeldom of more than half an inch in breadth. They are very ſmooth on the ſurface, and become gradually ſmaller from the baſe to the other extremity, where they terminate in a point. They are ſometimes of a duſky-green, which ſeems their natural colour, ſometimes reddiſh or purpliſh, and ſometimes white. The plant is extremely common on all our ſhores, and on thoſe of moſt other parts of Europe. Gerard calls it ſimply Alga; the generality of other authors, Alga anguſtifolio vitrariorum, from the Venetian glaſs-makers uſing it to pack up their glaſſes in. Some have burnt it to aſhes for making an alkali-ſalt for glaſs-making, but in this it is found to be greatly inferior to many other plants, and is now diſuſed.

2. *Alga breviore folio.*
Shorter-leaved Alga.

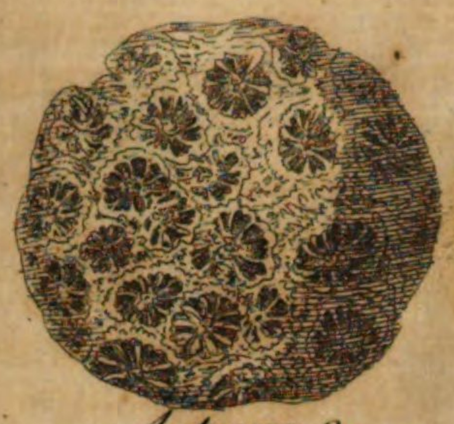
This is a much ſmaller plant than the former. Its baſe is a tuberous matter, of the length and thickneſs of a man's finger, faſtened to the ground or bottom by many fibres; from this there riſe, at the ſeveral joints, cluſters of leaves of the ſame graſſy form with thoſe of the former, but much broader in proportion to their length: they ſeldom exceed ſix inches in length, and are frequently near half an inch broad. They are of a tender and herbaceous texture, and often of a purpliſh or browniſh colour, though their natural one is a duſky green. This ſpecies is frequent about the iſland of Sheppey, and in many other places on our coaſts. Ray calls it Alga graminea minor.

3. *Alga anguſtiſſimo folio.*
The narroweſt-leaved Alga.

This in its manner of growth, reſembles the others, but is evidently a diſtinct ſpecies, as its leaves are longer than thoſe of the firſt kind, and hardly a quarter of an inch

Submarines.

Mycedium 2.



Asteroea 2.

Asteroea 3.

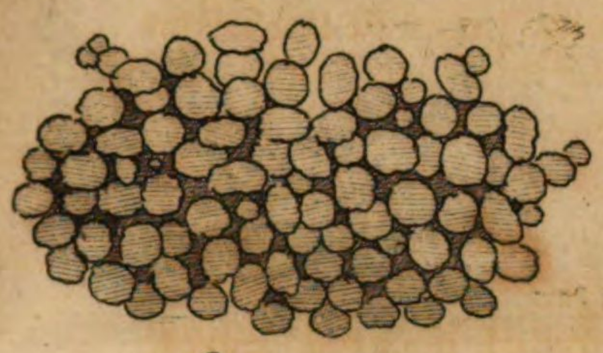
Madrepora 2.

Eschara 3.

Tubularia.

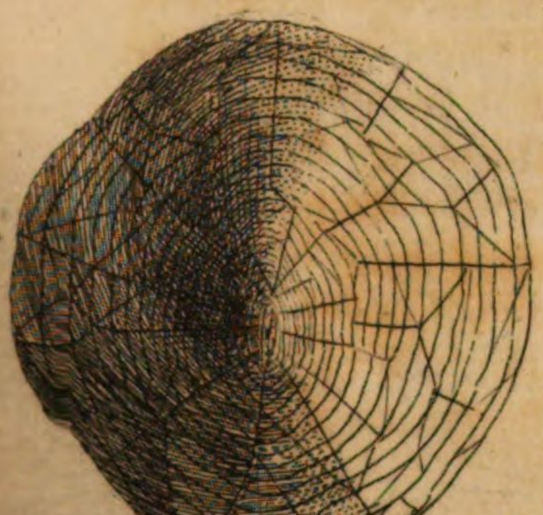
Acetabulum.

Corallum 1.



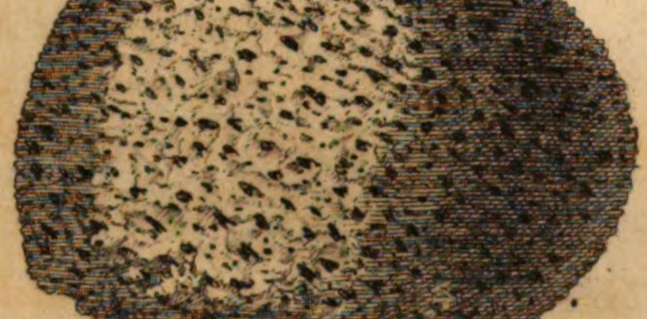
Ormus 1.

Corallina 1.



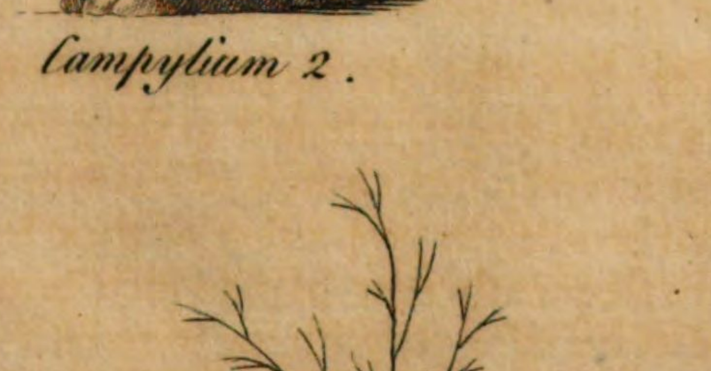
Alcyonium 3.

Campylium 2.

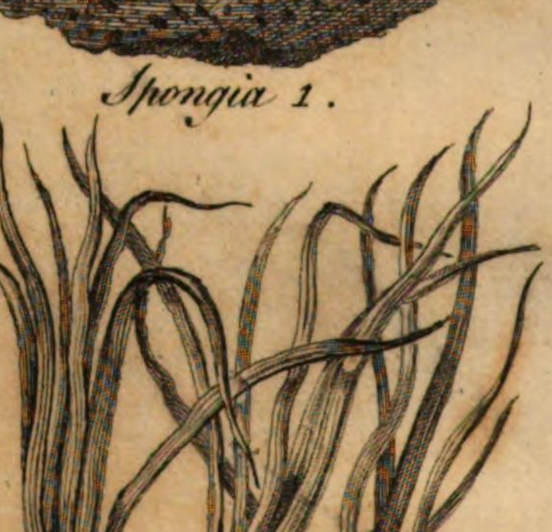


Spongia 1.

Fucus 1.



Strongylium 3.



Alga 1.

B. Cole Sculp.

inch in diameter in any part. They float about in the water, and make a very beautiful appearance. Their colour is naturally a pale bluiſh green, but occaſionally it becomes reddiſh or whitiſh. Their texture is ſomewhat more tough than that of the others, and the root ſlenderer in proportion to its length. This is not a native of England, but it is frequent in the American ſeas. Sir Hans Sloane has deſcribed it under the name of Alga marina graminea anguſtiſſimo folio.

We meet with accounts in authors of other ſpecies of Alga, but they ſeem to be founded upon error. The diſtinctions of theſe three are but very ſlight, but they are certain, regular and permanent, and therefore cannot but be owned as proofs of different ſpecies. What we meet with beſide theſe, under the name of different Algæ, are either one or other of theſe in a ſmaller ſtate, or ſome other accidental variation, miſtaken for different ſpecies; or they are plants of other genera, called by this name. Tournefort takes in the ſmooth confervæ of Dillenius into this genus of the Algæ, but improperly; and we meet with other inſtances of a like kind in others.

Ray, in his Synopſis of Britiſh plants, gives an account of ſeed-veſſels with perfect ſeed in them, growing to the ſides of young leaves of the Alga's. I have not met with what he deſcribes, and therefore cannot ſpeak with any certainty about it.

PLANTS.

PART I.

BOOK II.

Of FUNGI.

THE Fungi are a claſs of plants, very different from all others. They have indeed ſo little appearance of vegetables, that many have denied them to be ſuch, their being only excrementitious matter, protruded [illegible] kinds. A better philoſophy has taught the prelates [illegible]; and better opportunities of examining the ſubjects themſelves, though they have miſſed the colour or texture of [illegible] nor flowers like them, yet have abſolute and perfect ſeeds [illegible] parts of other more obvious plants, though without the ornamental ones; and ſeeds will produce plants like thoſe from which they are collected; and finally, the ſolar or [illegible] of Fungus's is the ſame with that of other plants, that their roots are of the ſame nature with thoſe of other vegetables, and therefore that they are as true plants as any other claſs of the vegetable tribe, though of a ſingular figure and conſtruction. The flowers conſiſting wholly of a ſingle antithera, have been diſcovered in many ſpecies, the ſeeds in all.

The Fungus's are extremely different in figure, and in their manner and place of growth, as well as in many other circumſtances; ſome of them grow on the ground, ſome on living trees, and many on decayed wood. Some are but of a few days duration, others remain for years. The general manner of growth of the ſeveral kinds naturally leads us to arrange them under the four following claſſes.

Claſs the Firſt. Fungi which grow horizontally.

Claſs the Second. Fungi which grow erect, and have pileï or heads.

Claſs the Third. Fungi which grow erect, and have no heads.

Claſs the Fourth. Fungi which grow under the ſurface of the earth in no [illegible] diviſion.

THE HISTORY OF PLANTS.

PART I.

BOOK II.

Of FUNGI.

THE Fungi are a claſs of plants extreamly different from all others. They have indeed ſo little of the common and general appearance of vegetables, that many have denied them to be ſuch, and contended for their being only excrementitious matter, protruded from decaying vegetables of other kinds. A better philoſophy has taught the preſent age, however, to ſet aſide ſuch opinions; and better opportunities of examining the ſubjects themſelves has taught us that the Fungi, though they have neither the colour or texture of other plants, nor leaves, nor flowers like them, yet have abſolute and perfect ſeeds preceded by the eſſential parts of other more obvious flowers, though without the ornamental ones; and that theſe ſeeds will produce plants like thoſe from which they are collected; and finally, that the vaſcular ſtructure of Fungus's is the ſame with that of other plants, that their roots are of the ſame nature with thoſe of other vegetables, and therefore that they are as true plants as any other claſs of the vegetable tribe, though of a ſingular figure and conſtruction. The flowers conſiſting uſually each of a ſingle anthera, have been diſcovered in many ſpecies, the ſeeds in all.

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FUNGI.

Class the First.

Such as grow in an horizontal direction on trees.

Genus the First.

AGARICUS.

AGARICUS is a genus of Fungus's growing in an horizontal direction on trees, lamellated on its under part, and producing distinct male and female flowers on the same plant.

The male flowers have neither calyx nor corolla, but consist each of a single anthera, affixed to the edge of one of the lamellæ.

Of the female flower no part is visible but the seed, which is small and roundish, and adheres to the sides of the same lamellæ.

It has been a custom to call all Fungi, which grow on trees, Agarics, without enquiring into their particular structure. But the different formation of their under part necessarily arranges the several species of these horizontal Fungi into distinct genera, and the name Agaric is only continued as a generical term to these lamellated ones, as having been applied most frequently to them: this, however, it is to be observed, excludes the Fungus, called Agaric in the shops, from the genus so called, that being porous underneath, and consequently a boletus, though its manner of growth has obtained it, in less inquisitive times, the name of an Agaric. We are not fond of changing officinal names, but must not retain them at the expence of confounding the genera.

1. *Agaricus durior villosus.*
Hard hairy Agaric.

This is a moderately large Agaric, and of an irregularly semicircular form. It grows to the wood on which it is found by a broad base, without any pedicle, and from this extends itself into a figure resembling half, or more than half of a circle, but somewhat too broad for its depth to be regularly of that figure. It is of a tough and firm texture, and is hairy, or rather downy, on its external surface, all that part being covered with a short, thick, and soft fibrous matter. It's principal or ground colour is a pale brown, but it is variegated with circular lines of a great variety of colours, purple, red, brown, and the like. Its under surface is covered with a vast number of extreamly thin and fine lamellæ; the flat surfaces of which, especially toward the bottom, are thick, covered with little roundish seeds, and on the edges of which hang rows of little oblong antheræ. This species usually grows single from the body it adheres to, but sometimes it is double, quadruple, or more, fresh plants of it growing from the sides of the old ones. It is very common with us on the stumps of old trees, and sometimes on wrought wood. It is plentiful in a wood beyond Paddington. Dillenius has described it under the name of Agaricus quercinus lamellatus, coriaceus, villosus; and Ray under that of Fungus arboreus holosericeus, inferne lamellatus.

2. *Agaricus crassus, glaber, margine integerrimo.*
Smooth, thick, even edg'd Agaric.

This is a larger Agaric than the former. It grows to the stumps of trees by a broad base, which conforms itself to their shape, and adheres extreamly firmly to them; from this it extends itself into a kind of semicircular form, but irregular, and generally longer than it is broad. It is usually, when full grown, about four or five inches in diameter, and an inch or more in thickness. It's circumference is somewhat undulated, and it's colour is grey, sometimes with a tinge of brown, sometimes of bluish with it. It's upper side is perfectly smooth, and it's under side covered with fine white lamellæ. These have seeds roundish and very small on them, and oblong antheræ hanging from their edges.

The whole plant is of an ill smell and nauseous taste. It is found with us at the bottom of rotten trees, but not common. J. Bauhine, who found it on old wallnut-

trees,

trees, has called it Fungus auritus juglandium albicans. I have met with it at the bottom of old beeches, in Charlton foreſt in Suſſex.

3. *Agaricus undulatus glaber.*
Smooth, undulated Agaric.

This is a ſmaller ſpecies than the former. It ſeldom exceeds two or three inches in diameter, but it is always moderately thick. It grows from a broad and thick baſe to a ſemicircular figure. It's ſurface is perfectly ſmooth; it's fleſhy part conſiderably thick, and it's gills large. It's edges are not ſmooth, as in many of the Agarics, but variouſly undulated, and as it were curled. It's colour on the upper ſide is a greyiſh or bluiſh, and on the under part white. It is of a ſofter conſiſtence than many of the other Agarics, and of an agreeable taſte and ſmell, like that of the common eſculent muſhroom. It is frequent about the roots of trees in Italy, where it is eaten as freely as the common muſhroom with us. We have it not in England. Tournefort deſcribes it under the name of Agaricus præcox albogilvus criſtatus; and Micheli under that of Agaricum eſculentum ſquammoſum glabrum ſuperne, obſcurum, inferne albidum lamellatum.

The other ſpecies of Agaric will be eaſily diſtinguiſhed by their names; they are, 1. The lobated Agaric. 2. The little, hairy, thin Agaric. 3. The hard Agaric, with reddiſh lamellæ. 4. The little, yellow, ſmooth Agaric. 5. The yellow, ſmooth, large, eſculent Agaric. 6. The hair Agaric. 7. The ſquammous Agaric, with cartilaginous lamellæ. 8. The great bluiſh ſquammous Agaric. 9. The hairy, lobated Agaric. 10. The white, ſmooth, eſculent Agaric. 11. The yellow Agaric, with white lamellæ. 12. The brown Agaric, with purple lamellæ. 13. The thick, white, ſmooth, eſculent Agaric. 14. The white, hairy Agaric, with red lamellæ. 15. The undulated hollow Agaric. 16. The reddiſh, ſquammous Agaric. 17. The yellow, ſpoon-like Agaric. 18. The ſtinking, yellow, fatty Agaric.

FUNGI.

Claſs the Firſt. Genus the Second.

PORIA.

PORIA is a genus of Fungus's growing horizontally, but having it's underſide not formed into lamellæ, but full of little holes or pores; and producing diſtinct male and female flowers on the ſame plant. The male flowers have neither calyx, corolla, nor ſtamina, but conſiſt only of ſingle antheræ of an oblong figure, one or more of which are affixed to the edge of every hole. The female flowers have nothing viſible but the ſeed, which adheres to the inner ſurface of the tube.

Of the Poriæ, ſome conſiſt of a ſimple, uniform ſubſtance, the under-part of which is perforated to a greater or leſs depth, and formed into a kind of tubules.

Others conſiſt of two perfectly different ſubſtances. The upper one ſolid, the under one, which is eaſily ſeparable from it, formed of a multitude of cylindric tubes applied cloſely and evenly together, ſo as to repreſent an uniform ſubſtance, pierced with holes as in the others. The flowers of many of the Poriæ hang ſo looſely to the mouths of the tubes, that it is ſcarce poſſible to avoid ſhaking them off in gathering the plant; in others they adhere more firmly, and are eaſily ſeen. They are in all of an oblong figure, and the ſeeds, in all that I have yet examined, are oval and ſmall.

1. *Poria craſſior foraminibus parvis rotundis.*
The thick Poria, with ſmall, round foramina.

This is one of the ſimple Poriæ, whoſe under-part is pierced for the reception of the ſeeds. It is a very large and thick Fungus. It adheres to the matter it grows on by a broad baſe, from which it extends itſelf into an irregularly ſemicircular figure; uſually ſomewhat longer than broad, and often nearly as thick as it is long; ſeldom of leſs than two or three inches in thickneſs: it's breadth is from three or four to ten or twelve inches. It is of a very firm and ſolid ſubſtance; ſmooth on the upper ſurface, and

and of a greyiſh-white colour. It's under ſurface is at firſt whitiſh, but it grows brown in time, and is full of innumerable little holes, on the edges of which hang little oblong antheræ, without pedicles, uſually four to every hole; and within each are placed a great number of extremely minute oval ſeeds, adhering faſt to the ſides, in ſeveral circular ſeries. There frequently grow three or four of theſe plants over one another, ſometimes they ſtand ſingle. They are common with us on old elms, and other trees, and frequently grow to a vaſt ſize. Dillenius calls it Agaricus poroſus igniarius fagi, ſuperne albus, inferne fuſcus; and Ray, Fungus pedem equinum referens. The common people in ſome parts of England dip it in a ſolution of ſalt-petre, and dry it again, after which it is an excellent matter to uſe inſtead of tinder, to receive the ſparks of fire from a flint and ſteel.

2. *Poria lata rufeſcens foraminibus majuſculis.*
The broad, reddiſh Poria, with large holes.

This is a large and very ſingular ſpecies. It uſually adheres to the ſubſtance it grows on by a thick, but not very broad, baſe, and from this, after it is extended in length for half an inch or more, ſo as to make a kind of neck, or pedicle, it extends itſelf into a ſemicircular form, ſometimes ſimple, ſometimes divided into two lobes. It often grows to ſix or eight inches in diameter, often is ſmaller; and it's manner of growing with a neck is not certain, for it ſometimes extends at once from a broad baſe into a ſemicircular figure. It is conſiderably thick and fleſhy, often an inch or two, or more. It's colour on the upper ſurface is a duſky, ferrugineous red; when cut into, it is more red, and it's juice is of a blood colour. It is of the number of thoſe Poriæ whoſe under-part eaſily ſeparates from the upper. It is of a duſky-yellowiſh colour, and is full of moderately large holes, or, more properly, it is compoſed of a number of pipes, or tubes, arranged together, whoſe open end gives this repreſentation; at the mouths of theſe holes there hang ſmall antheræ, but what number to each cannot be eaſily determined, becauſe they fall off on the leaſt ſhaking of the plant. The inſide of each tube affords many ſeries of fine, ſmall, oblong ſeeds.

The plant is of the eſculent kind, though not eaten with us. It's ſmell is agreeable; it's taſte that of the common muſhroom, but richer. It is found with us ſometimes in woods, growing to the trunks of old trees: I have two or three times met with it in Hornſey-wood in January. Dillenius calls it Agaricus poroſus, rubens carnoſus hepatis facie; and Merret, Fungus hepatis facie, et colore. It has, indeed, ſomething of the appearance of the liver, and much of it's colour. It grows very common on the cheſnut-trees in many parts of Italy, and is ſometimes carried to market.

3. *Poria leviſſima, craſſiſſima, friabilis.*
Light, very thick and friable Poria.

This ſpecies is what is called Agarick in the ſhops. It is of the number of thoſe Poriæ which are of a ſimple ſubſtance, and whoſe inferior part is pierced full of holes. It is extremely irregular in it's manner of growing, and it equals any of the Agarics or Poriæ in ſize. It generally adheres to the ſubſtance it grows on by a broad and firm baſe, from which it extends itſelf to a great breadth and thickneſs. It's figure is often very irregular, but it uſually tends to the ſemicircular, and is often as thick as it is long or broad. It's colour is grey on the outſide, and white as ſnow within: it's upper ſurface is ſmooth, it's lower very irregularly pierced with holes of an oblong and uncertain figure. The flowers we have had no opportunity of ſeeing, but the Agaric in our druggiſts ſhops frequently contains a quantity of ſeeds, which a microſcope eaſily detects, after laying open the tubular cavities. The whole Fungus is of a very diſagreeable ſmell, and of a very nauſeous taſte: it is ſweetiſh, when firſt taken into the mouth, but afterwards acrid, bitter, and loathſome in the higheſt degree. It is frequent on the larch-trees in many parts of Europe, and is found on ſeveral others. We have it not in England: we have, indeed, a Poria with all the external appearance of it, but it is not bitter. Moſt of the botanical and medical writers have deſcribed it under the name of Agaric. It was long famous as a purge among the ancients, but, at preſent, it is quite out of uſe; it's nauſeous taſte, and the large quantity of it neceſſary for a doſe, beſide it's griping very much in the working, have rendered it not worth notice,

at a time when we have ſo many gentler and pleaſanter medicines that will anſwer the ſame purpoſe.

The ſpecies of Poriæ, beſide theſe, are conſiderably numerous, and authors who have written on theſe ſubjects have made them appear much more ſo, by deſcribing the varieties of the ſeveral kinds under the names of diſtinct ſpecies: the moſt ſingular, beſide thoſe here deſcribed, are, 1. The great, yellow, naked, or ſpungeous Poria. 2. The curled, or endive-like Poria. 3. The white, light, thick Poria: this is the ſpecies which ſo nearly reſembles the Agaric of the ſhops; it is common on willows about Chelſea. 4. The ſpreading, thin Poria: this grows plant by plant, in a circular form, often ſpreading to a ſurpriſing extent. 5. The great, brown, thick Poria. 6. The ſquammated, variegated Poria. 7. The hairy Poria, with undulated edges. 8. The fan-ſhaped Poria. 9. The woody, yellow Poria. 10. The tuberculoſe and whitiſh Poria. 11. The thick, eſculent, white Poria. 12. The eſculent, criſtated, ſquammoſe Poria, called by the Italians Grifole. 13. The yellow-bottomed, brown Poria. 14. The white, ſulcated Poria. 15. The purple, hairy Poria. 16. The ſinuous Poria. 17. The hairy, yellow Poria. 18. The reddiſh, cartilaginous Poria. 19. The whitiſh, thin, hairy Poria.

FUNGI.

Claſs the Firſt. Genus the Third.

ODONTIA.

ODONTIA is a genus of Fungus's, which grow horizontally, and have their under ſurface formed into oblong, ſlender bodies, like teeth; producing male and female flowers in diſtinct parts of theſe teeth: the male flowers conſiſt only of antheræ of an oblong figure, affixed to the ſides of ſome of the teeth, and no part of the female flowers are diſcoverable except the ſeeds, which are ſmall and oval, and adhere ſometimes to the ſame, and ſometimes to different teeth, on the ſame plants, always to different parts of the ſurface. The denticuli are of various lengths in the different ſpecies, and in the different parts of the ſame ſpecies; and in ſome they are round, in others flat. Micheli, and ſome others, have placed among theſe ſpecies ſome fungus's which have no horizontal top for the teeth to grow from, but conſiſt merely of branched fibres: but theſe belong to another genus of another order, to be deſcribed hereafter.

1. *Odontia villoſa denticulis planis.*
The hairy Odontia, with flat teeth.

This is a very elegant ſpecies, and ſhews the denticulation extremely plainly and diſtinctly. It riſes from an extremely broad baſe, affixed to ſome old tree, and has there it's greateſt diameter. It does not extend into breadth, after it grows from the baſe, but is continued from it in a ſemicircular form, it's diameter decreaſing all the way to the extremity. There generally grow three or four plants of it near one another, often more. It's ſize is two or three inches in breadth at the baſe, and a little leſs than that in length. It's upper ſurface is whitiſh and hairy, and uſually riſes into protuberances in ſome places. It's under ſurface is formed into a vaſt number of oblong, flat teeth, conſiderably large, and ſtanding in ſeveral rows, one behind another. On the ſurfaces of theſe there may be ſometimes ſeen antheræ, placed in rows, and often ſmall ſeeds, of an oval figure, irregularly ſcattered about them. It grows in many parts of Yorkſhire and Leiceſterſhire, on old oaks and elms that ſtand much expoſed. Micheli deſcribes it under the name of Agaricum ſquammoſum album, ſuperne villoſum, inferne denticulis longioribus præditum.

2. *Odontia glabra denticulis latis.*
The ſmooth Odontia, with broad teeth.

This is a very beautiful Fungus. It grows by a long and continuous baſe to ſome old wood, extending itſelf, not into a ſemicircular figure, as moſt of the others do, but running

running on in length in a ſurpriſing manner, and forming a vaſt flat maſs, with undulated edges. It will extend in this manner to three or four feet in length, but ſeldom ſtands out further than to two or three inches from the ſurface: it is ſeldom above a quarter of an inch thick, often thinner, and ſometimes fixes it's back, or, properly, it's upper part, to the wood on which it's baſe is fixed, ſo as to form only a kind of cruſt to it. When looſe and free, it's ſurface is found to be ſmooth, it's colour a duſky brown, and it's ſmell and taſte very diſagreeable. It is very tough and firm, and is, in it's lower part, formed into a vaſt number of teeth, of an inch long, and of the breadth of a wheat-ſtraw, or more. There are ſeveral ſeries of theſe, ſtanding behind one another, all entire and ſeparate; they are of the ſame tough ſtructure with the reſt of the Fungus, but of a pale roſe colour in the middle, and of a beautiful deep-blue at the edges. In February ſeveral of the longeſt of them are covered with a ſort of browniſh powder, which, when examined, is found to be compoſed of cluſters of the male flowers, or antheræ, each of an oblong figure, and each placed ſeparately on the tooth, no ſets of them near one another, but all regularly arranged into one congeries, as if they conſtituted together only one flower. The ſeeds are very ſmall, and may be ſeen on the ſurface of the ſhorter teeth with the help of a good microſcope, almoſt through the whole ſummer. Mr Sherard firſt diſcovered this beautiful plant growing to the beams of a cellar in Wimbleton: it has ſince been found in many ſuch places. It is deſcribed in the laſt edition of Ray's Synopſis under the name of Agaricus coriaceus longiſſimus, pectinatim inferne diviſus.

3. *Odontia rotundior denticulis ſubulatis.*
The rounder Odontia, with ſubulated teeth.

This is a ſmall ſpecies of Odontia; it rarely exceeds the breadth of a half-crown, and hardly equals it in thickneſs. It grows to the ſtumps of old trees by a firm baſe, thick, and not very broad; from this it extends itſelf into a ſemicircular figure, often into a much larger part of a compleat circle. Several plants of it uſually grow over one another at a ſmall diſtance, and often the branches of a decaying tree are quite ſurrounded with them; they ſometimes ſtand ſo cloſe as to injure one another's figure, and ſometimes this occaſions them to grow very irregularly. Their upper ſurface is hairy, or downy, and of a browniſh grey; their under part is paler, and is formed into a multitude of ſhort teeth: they indeed deſerve the name of teeth better than thoſe of any other ſpecies, for they are more of their ſhape, and, indeed, much reſemble the ſhort and ſharp teeth of ſome quadrupedes: they are about a fifth of an inch long, and are not flatted, but of a rounded figure, thickeſt at the baſe, and, growing gradually ſmaller to the other extremity, they there terminate in a ſharp point. The whole plant has a diſagreeable ſmell, and a nauſeous taſte. The teeth are often found duſty with the farina in ſpring; and in ſummer the ſeeds may be diſcovered on the ſides of them.

This ſpecies is common in our woods, on the branches of old trees, and ſometimes on rotten wood that has been wrought. Micheli calls it Agaricum ſquammoſum album, ſuperne ſubhirſutum, inferne pectinatum. The other ſpecies of Odontia are, 1. The broad Odontia, with a ſhort pedicle at the ſide. 2. The coriaceous Odontia, with white teeth. 3. The purple-teethed Odontia. 4. The thin, ground Odontia, with long cylindric teeth.

F U N G I.

Claſs the Firſt. Genus the Third.

AMPHITRETIA.

AMPHITRETIA is a genus of Fungus, growing horizontally, or irregularly, and conſiſting of a light, ſpungy matter, on every ſurface of which there are foramina: on the edges of theſe grow male flowers, conſiſting only of oblong, ſingle antheræ, and within them are lodged very ſmall, oval ſeeds.

1. *Amphitretia craſſior undulata.*
The thick, undulated Amphitretia.

This is a large, but ſhapeleſs Fungus. It grows by a great baſe to the bottom of old trees, from which it extends itſelf every way, often very irregularly, ſometimes in a kind of

ſemi-

ſemicircular form. It grows to four or five inches in breadth, and ſometimes to two or three in thickneſs; it's ſurface is not regular, but often protuberates in ſeveral places. It's edges are thinner than the reſt, and uſually turn up a little. It's whole ſubſtance is light and ſpungy; it's colour white: it, in the whole, much reſembles the crumb of new bread, but that it's pores are not ſo large. It is porous on every part, the upper ſurface as well as the under being pierced with innumerable little holes, on the edges of which may be ſometimes ſeen a ſingle anthera, and within are uſually found ſeveral ſeeds, extremely ſmall and light.

This ſpecies is frequent in Charlton-foreſt in Suſſex, in Auguſt and September, about the ſtumps of beech-trees; it ſometimes grows from the wood, ſometimes from the ground. Micheli has called it Agaricum album terreſtre medullam panis referens: he had probably only found it growing on the ground.

2. *Amphitretia tenuior durior.*
Thin and ſomewhat hard Amphitretia.

This is an extremely ſingular ſpecies in it's manner of growth. It always grows to the lower parts of the ſtalks of plants: it affixes itſelf to theſe by a broad flat baſe, and from this extends itſelf, not into a ſemicircular form, but every way round the ſtalk, and afterwards ſpreads in the ſame manner both lower and higher, till it forms, at length, a kind of fungous coat round the whole ſtalk for two or three inches: a part of this ſometimes penetrates a little way into the ground, but more uſually the whole is, from the ſurface, to two or three inches high. It is of a black colour, and very ſpungy ſubſtance, but it's utmoſt thickneſs, whch is uſually in the lower part, does not uſually exceed a third of an inch; ſometimes, indeed, it grows conſiderably thicker. It's whole external ſurface, and it's internal ſurface alſo, where it does not adhere to the ſtalk of the plant, are covered with little holes of an irregular figure, on which there may be ſometimes ſeen ſingle antheræ at the edges, and almoſt always ſeeds may be found within, on a nice examination. It's whole ſubſtance is ſpungy, but ſomewhat harder than the former; it's ſmell and taſte very diſagreeable. It is not uncommon with us in December and January, about the lower parts of the ſtalks of ſuch plants as are up at that time, eſpecially in damp woods. Micheli deſcribes it under the name of Agaricum ſpongioſum nigrum, imæ plantarum caulis parti adnaſcens.

3. *Amphitretia foraminibus maximis.*
Amphitretia with very large holes.

This ſpecies grows to the lower parts of the ſtalks of plants, in the ſame manner as the former; but it differs greatly from it in it's manner of growth from the baſe, and in it's general ſtructure. It is a ſmall fungus, rarely exceeding half an inch in diameter, and with that uſually having a quarter of an inch in thickneſs. It grows from a moderately large baſe into an oblong and irregular form, not ſurrounding the ſtalk of the plant, but ſtanding out horizontally from it. Sometimes only a ſingle plant is found, ſometimes ſeveral together. It's colour is a duſky-white, it's ſubſtance very ſpungy, and it's upper, as well as it's under, ſurface pierced full of large holes, which penetrate deep into it, and are not round, but flattiſh, and very irregular. The antheræ, or male flowers, of this I have not been able to diſcover: the ſeeds are eaſily ſeen in it; they lie in round ſeries on the inſide the tubes or holes. It is common about the ſtalks of plants in many of our woods; it grows near the ground, and is generally buried under the dead leaves which cover the earth in thoſe places. Micheli calls it Agaricum album ſpongioſum, brunellæ plerumque adnaſcens: he found it at the baſe of that plant in July in Italy. I have often met with it in January and February in Cane-wood, about the roots of ſeveral different plants, under the dead leaves.

4. *Amphitretia tenuis ſucculenta.*
The thin, ſucculent Amphitretia.

This is by much the moſt beautiful of all this genus. It grows to the baſe or bottom of the ſtems of little ſhrubs, and is of a beautiful violet colour. It adheres by a broad baſe, from which it extends itſelf into an irregularly ſemicircular form. It's edges are undulated, and often turned up, and it's whole ſurface uneven. It grows to the ſize of

of an inch in diameter, but is ſeldom thicker than a half-crown piece. It is ſpungy and ſucculent, eaſily compreſſed, and readily parting with a viſcous whitiſh juice. Both it's upper and lower ſurface are pierced full of ſmall irregular holes, on the ſurfaces of which hang ſingle, oblong antheræ, and within their cavities there are multitudes of ſmall ſeeds.

Theſe are all the ſpecies of Amphitretia hitherto known. Micheli has the honour of having diſcovered the three firſt; the laſt I met with this autumn in Richmond-gardens, at the roots of ſome of the flowering ſhrubs in the new walks.

FUNGI.

Claſs the Firſt. Genus the Fourth.

SCINDALMA.

SCINDALMA is a genus of Fungus's, growing horizontally on the barks of trees, and compoſed of a great number of plates, or flakes, covering one another, all of a ſemicircular form, and each compoſed of a multitude of tubules, or ſhort pipes, arranged cloſe together, and adhering firmly to one another by means of an intermediate fungous matter.

1. *Scindalma laminis tenuioribus.*
The thinner-flaked Scindalma.

This is a very large Fungus, and is uſually of a ſemioval or ſemiorbicular figure. It grows to the barks of old trees, and appears no other than a ſolid maſs of this figure, affixed by it's whole baſe to the bark, and perforated all over it's ſurface with very ſmall holes. When taken off and examined, it is, however, found of a very ſingular and very regular ſtructure. It's colour is a browniſh-grey, it's ſubſtance conſiderably hard, and it is much heavier than moſt of the Fungi; when cut open, it is found to be compoſed of eight, ten, or more laminæ, laid regularly and evenly over one another, and each of the ſame regular ſtructure. They are each of the thickneſs of the tenth of an inch, or thereabout, and of a white colour, and tolerably firm texture, though full of holes: held up againſt the light, each appears like a fine ſieve, and, when accurately examined, each is found to have a vaſt number of holes bored in both ſurfaces. The whole Fungus grows to five or ſix inches in breadth, and half as much in thickneſs. It endures the whole year, indeed many years, but September is the only time in which it is to be found in flower. At this time a light duſty matter may be ſeen on it's ſurface, which is the antheræ; and, on cutting it tranſverſely open, the upper ſurface of every one of the laminæ will be found to be covered with the ſame powder; when examined with a microſcope, this powder is found to be compoſed of oblong granules, one ſtanding on the ſurface of each aperture or hole; the under ſurface of the laminæ, though equally porous, never has a ſingle anthera adhering to it: in the cavity of the tubules is found a fine powder, conſiſting of oval globules, adhering to the inner ſurface of the tubes, principally in the lower part: this is the ſeed. I never ſaw this ſpecies except once in a wood near the late lord Petre's, who with great pleaſure obſerved it's ſtructure and fructification with me. It grows to the old trees in that wood in ſeveral places. Micheli calls it Agaricum durum, craſſum, aſſulatum, ilicibus adnaſcens, grieum; but it's colour with us is rather a pale whitiſh-brown than grey.

2. *Scindalma laminis craſſioribus.*
Thick-flaked Scindalma.

This is a large and coarſe Fungus, but of a beautiful white colour. It grows to the bigneſs of a man's head, and is uſually of the figure of half a ſphere. It is extremely hard and firm to the touch, and ſcarce ſhews any appearance of pores on the ſurface; when cut open, it is found to be compoſed of four or five very thick hollow coats, laid cloſely upon one another. Each of theſe is pierced with innumerable holes on the upper and under ſurface, but it is eaſy to ſee that theſe holes do not communicate with one another, but that each of theſe coats is compoſed of two ſeries of tubes, meeting, but

not open at their baſes. Theſe coats are all of the ſame pure white colour with the external one, and their perforations are ſo regular, that they make a very beautiful appearance in autumn. On cutting into this ſpecies, there will be found antheræ on both the ſurfaces of every coat; and, in winter, ſeeds are found in great numbers in every pore or tubule, adhering to the ſides in form of a fine powder.

I have only met with this ſpecies in one place, which is the wood above mount Sorrel in Leiceſterſhire. There it grows to the old trees of all kinds in conſiderable plenty. Theſe are all the known ſpecies of this very ſingular genus of Fungus.

FUNGI.

Claſs the Firſt. Genus the Fifth.

STEREUM.

STEREUM is a genus of Fungus's, of a ſolid and uniform ſtructure, neither divided into lamellæ, nor pierced with holes, either externally or internally, but whoſe upper and under ſurfaces are the ſame, and both apparently ſmooth and uniform. The fructifications of theſe Fungus's are produced on the ſurface, and conſiſt of antheræ and ſeeds.

1. *Stereum tenuius villoſum.*
Thin, hairy Stereum.

This is a ſmall but a very beautiful Fungus. It grows to old trees by a broad baſe, and uſually a cluſter of the plants grow together. It creeps lengthwiſe to three or four inches, often more, and ſends out from ſpace to ſpace ſemicircular bodies, of an inch or more in diameter. Theſe ſometimes grow ſingle, each from its own diſtinct baſe; but more frequently the baſe is continuous, and extends itſelf in length, as juſt obſerved. The colour is very beautiful, often a deep purple, ſometimes a paler, and ſometimes yellow. The colour, be it what it will, is always paleſt about the baſe of the Fungus, and deeper at the edges, and is uſually ſtronger and deeper on the under ſide, than on any part of the upper. The baſe is often whitiſh; and the whole upper ſurface in this caſe is uſually variegated, either with purple and white, or with yellow and white. The Fungus is not in any place ſo thick as a half-crown, in moſt not ſo thick as a ſhilling. It has no pores nor lamellæ on any part, but both its upper and under ſurfaces are in February and March covered with a mixt powder, part conſiſting of oblong, and part of roundiſh granules, which are apparently the firſt the antheræ, the latter the ſeed. The upper ſurface is covered with a ſoft kind of down, which retains theſe granules of both kinds, much longer than they are found on the other.

This ſpecies is frequent on old trees about Chelſea. Dillenius calls it Agaricus villoſus tenuis, inferne lævis. Ray, Fungus arboreus villoſus, inferne planus; and Micheli, Agaricum Alpinum ſquammoſum membranaceum, ſuperne obſcurum & ſericeum, inferne rufeſcens.

2. *Stereum craſſius læve oblongum.*
The thick, ſmooth, oblong Stereum.

This is one of the moſt elegant of all the Fungus kind. It riſes from a baſe equal to any part of it in breadth, and uſually of a ſomewhat greater thickneſs. From this it grows in an horizontal direction, to the length of three, four, or five inches or more. It's breadth is three or four inches, nearly as much as it's length, and it's thickneſs about a quarter of an inch or more; in all this, however, it varies extreamly; it is ſometimes much narrower, and much thinner, and ſometimes it is almoſt as thick as broad. It never, however, aſſumes a ſemicircular figure, and it's moſt perfect one ſeems oblong, broad, and flat. It is perfectly ſmooth both on the upper and under ſurfaces, and is of an elegant bright red colour, variegated in a very beautiful manner with black and yellow; theſe colours are diſpoſed in veins and ſpots in a beautiful manner, and the whole ſurface is ſmooth and gloſſy. It ſometimes grows ſingle, but

but more uſually ten or twenty plants of it grow in a cluſter, in which caſe it is very conſpicuous.

There is not the ſmalleſt pore viſible in any part of it; yet at a certain ſeaſon every year, which is about Auguſt, the whole plant is covered with a fine powder, which is evidently compoſed of two kinds of granules, oblong and round ones: the former are the farina, the latter the ſeeds.

It grows to the rotten ſtumps of trees, and to rotten wood of any kind, but it is not very common. I once found above forty plants of it on an old gate-poſt near Paddington, and have two or three times ſeen it about the ſtumps of trees in Charlton foreſt. Ray calls it, Agaricus digitatus maximus ex luteo, coccineo, & nigro eleganter variegatus. Merret, Fungus corallii rubri colore, multis lineis nigricantibus & maculis luteis inſignitus.

3. *Stereum craſſiſſimum durum.*
Hard and very thick Stereum.

This is a very large Fungus, but has little elſe remarkable about it. It grows to old trees by a broad and extreamly firm baſe, which often is ſo well fixed, that a part of the wood is eaſier pulled away with it, than it is ſeparated. From this baſe it extends itſelf irregularly into ſomewhat of a circular, or partly circular form. We often ſee it making nearly a whole round, it's baſe appearing like a kind of very thick and very ſhort pedicle at it's ſide; often it grows only ſemicircular, it's baſe extending ſo far, as to make the broadeſt part of it. It's diameter is often eight or ten inches, ſometimes more; it's thickneſs is from two to four or ſix inches. It is extreamly hard and ſolid, and remains many years; but, when very old, it ſometimes cracks on the ſurface. It's colour is white, ſometimes very pure and clear, ſometimes browniſh or greyiſh. It's ſubſtance is almoſt woody, it's ſurface ſmooth and uniform, with no marks of lamellæ or pores on it. Toward autumn, however, it is found duſty in ſeveral parts, and this duſty matter, when examined, is found to be partly the antheræ, partly the ſeeds, as in the others of this genus. This kind of duſt wipes off very eaſily from them all. This ſpecies is very common on old elms and other trees about London. J. Bauhine calls it, Fungus denſus ad ellychnia; and others, Fungus igniarius.

The other ſpecies of the Stereum are, 1. The gelatinous, membranous, and ſinuated Stereum. 2. The lichen-like villoſe Stereum. 3. The little white, trilobate Stereum. 4. The little red lobated Stereum. 5. The thick brown Stereum, growing in the fiſſures of old wood, and called oak leather. 6. The tufted, hollowed, thin Stereum. 7. The blue, lichen-like Stereum. 8. The reddiſh, thicker lichen-like Stereum. 9. The white, very thin, and dry lichen-like Stereum. 10. The brown, dichotomous, wood Stereum. 11. The yellow, fibroſe Stereum. 12. The black, reticulated Stereum. 13. The white, hairy, reticulated Stereum. 14. The fine velvety, greeniſh Stereum.

FUNGI.

Claſs the Second.

Such as grow erect, and conſiſt of pedicles crowned with Heads.

Genus the Firſt.

LEPIOTA.

LEPIOTA is a genus of Fungus's, conſiſting of a pedicle ſupporting at it's top a head, the under part of which is divided into innumerable thin and fine lamellæ. The Lepiotæ are the moſt common of all the ſpecies of Fungi. They have with us acquired the name of muſhroom, in preference to all the others, and Micheli, who has given peculiar names to the reſt, calls theſe Fungi, as if that name belonged peculiarly to them. The common eſculent muſhroom is of this kind, and there are almoſt innumerable others, which approach to it in figure and ſtructure, though they want it's pleaſant flavour, all which are of this genus.

The

The fructification of the Lepiotæ is this: they produce male and female flowers on distinct parts of the same plant. The male flowers have no cup or corolla, but consist of a very short stamen, to which is affixed in some species a single anthera, in others four or more. The female flower we can distinguish no part of but the seed. This is extreamly minute and round, and in some species stands single, in others in clusters of four or more together. The antheræ are affixed to the edges of the lamellæ; the seeds to both sides of them. Where the male flower consists of a single anthera, the seeds stand single; where there are four antheræ affixed to the same stamen, as is usually the case in the others, the seeds stand in little clusters, four together. If these fructifications of the Lepiotæ were larger and more visible, we should make two, or perhaps more genera, instead of one of them: but where the fructification is so minute, as not to be distinguishable without the help of powerful microscopes, we are not to pay so much regard to it in a work of this nature, where the obvious characters are the proper ones for establishing generical distinctions on.

The lamellæ, in some of these Fungus's, stand very close, in others farther asunder; and in some, where a larger distance is necessary for the ripening of the seeds, the lamellæ have little protuberances of a conic figure growing on their sides, which prevent their touching one another, while the seed is ripening, and which wither, as soon as it is fallen. We have called this genus Lepiota, from the Greek λεπις a lamella. Some of the Lepiotæ grow single, one stalk only arising from the root; others have several pedicles arising from the same root; and of both these kinds some are simple, each stalk or pedicle running up single, and producing only one head; others are ramose, each pedicle dividing into several stalks, and each stalk having it's peculiar head.

Many of the Lepiotæ have an annular membrane growing from the upper part of the stalk, and joining the edges of the head, while small; this is separated from the head, or else from the stalk, by the expanding of the head. In some species it remains on the stalk, in others it hangs to the edges of the head; but in most it is very tender, and falls soon to pieces, though in others it remains as long as any part of the Fungus.

In some species of the Lepiotæ, the seeds falling from the heads immediately shoot, and produce other perfect Fungus's like the parent; in others they first produce only roots, which grow and spread themselves under the ground to a great extent, and after a year or two shoot up pedicles in abundance, with heads to them. Finally, others shoot at their first falling into perfect Fungi of the same kind, formed in miniature, in a kind of cases or involucra, by the bursting of which afterwards they are allowed to grow up: in some of these species the involucrum perishes, as soon as the plant grows up from it; in others it remains, and grows up with it: in some it remains affixed to the root, in others it's parts are seen on the very summit of the head.

Obvious and distinct as these several characters appear to be, however, they are not to be expected with any degree of certainty: there are no plants which vary so much in their manner of growth as the Lepiotæ. The branched kinds are sometimes found simple, the simple ones sometimes branched, and the annular appendages of the stalk, as well as the remains of the involucra, are sometimes found permanent, sometimes not, on the several individuals of the same species.

The seeds of many of the common Lepiotæ, properly sowed, will produce under the eye their proper species. The first appearance of these is usually the involucrum, containing the plant in miniature, from which it afterwards grows up in its proper form.

1. *Lepiota simplex crassius pediculo longiore.*
The single, thick Lepiota, with an oblong pedicle.

This is a moderately large species. It's root is somewhat tuberous; it's stalk round, and of the thickness of a child's finger. It's head obtusely conic, and of a dull brownish colour. It grows to about four inches in height, and it's head is near two inches in diameter at the base. The lamellæ are of a pale brown. The whole plant is succulent and of a good smell, and is worthy to be received at our tables, though at present not regarded; the stalk is hollow, and there is no annular rim on it. The flowers in this species are single, and the seeds in like manner stand single on the lamellæ. It is common in dry pastures in many parts of England. Ray has described

it

it under the name of Fungus eſculentus pileo & lamellis albis, but they are not properly white; he only ſeems to have meant to diſtinguiſh it from the common redgilled kind.

2. *Lepiota ſimplex lævis pediculo craſſo bulboſo.*
The ſmooth Lepiota with a thick, bulbous pedicle.

This is a large and beautiful Fungus. It grows to about four inches in height, and it's head is more than half an inch in diameter. The bottom of the pedicle is a bulb of an irregularly roundiſh ſhape, and of the bigneſs of a large walnut; from this the pedicle continues of the thickneſs of a man's finger, and the head is obtuſely conic. The pedicle is whitiſh; the outſide of the head of a pale brown, and gloſſy, and the lamellæ white; the head is thick and fleſhy, but of an ill ſmell. The flowers in this ſpecies ſtand ſingle, and the ſeeds alſo are diſpoſed ſingly on the lamellæ. There is no annular membrane on the ſtalk. It is common on many of our heaths, among the fern and furz-buſhes; Putney heath produces a great quantity of it. C. Bauhine and Ray deſcribe it under the name of Fungus pediculo in bulbi formam excreſcente.

3. *Lepiota annulata ſimplex ſquammata.*
The ſcaly, annulated, ſimple Lepiota.

This is alſo a large Fungus. It grows to four or five inches in height, and it's head is three or four inches in diameter. It's pedicle is ſomewhat thick at the baſe, and from thence riſes of the thickneſs of a man's finger. It is not ſmooth, but ſquammated as it were with the remains of external membranes decayed; near the top it has a beautiful annular membrane, of a tough texture, and uſually ſomewhat erect, ſometimes horizontal, ſometimes dependent. The head is broad and almoſt flat, rather rounder in it's manner of riſing than conic. It's edges turn in, and it's external ſurface is cracked and ſquammated, as the pedicle, with the remains of ſome other membranes. The whole plant is of a ſomewhat deep, but not unpleaſant, brown colour, except the lamellæ, which are ſometimes whitiſh, ſometimes of a pale red.

It is frequent with us in woods and on heaths. Hampſtead heath and Cane wood abound with it. Fabius Columna calls it, Fungus dipſacoides quercinus; and C. Bauhine, Fungus bulboſus fuſcus duplici pileolo.

4. *Lepiota ramoſa, glutinoſa, flava.*
The yellow, glutinous, ramoſe Lepiota.

This is a very ſingular and very elegant ſpecies; it riſes from a thick tuberous root, and that uſually with three or four ſtalks. Each of theſe is ſoon after divided into two or three more, and theſe ſometimes ſend out lateral ramifications, ſo that it is not uncommon to ſee ten or twelve branches from one root. Each of theſe has it's head of a circular figure very little elevated at the ſummit, and often hollowed. The ſtalks are about a third of an inch in diameter, and the heads an inch and half broad. The ſtalks are of a pale whitiſh colour, the heads of a deep yellow, and covered with a gloſſy, glutinous matter; the lamellæ are white. The whole plant has a ſtrong and diſagreeable ſmell. The antheræ in this ſpecies ſtand four on each ſtamen, and the ſeeds are accordingly arranged in little cluſters, four together. It is common at the ſtumps of old trees in autumn: there is alſo a ſimple Fungus of this genus which reſembles it in colour, which grows in the ſame places, and, till taken up, is eaſily miſtaken for it. This is found very plentifully in Hornſey wood, and about Highgate and Hampſtead.

Theſe four ſpecies may ſerve to give a general idea of the different appearances of the Lepiotæ. The other ſpecies are extreamly numerous; the principal of them will, however, be eaſily underſtood by their names. They are, 1. The common eſculent Lepiota. 2. The great, green, rough Lepiota. 3. The flat-headed, yellow Lepiota. 4. The pale, yellow, contorted, eſculent Lepiota, called the chanterella. 5. The funnel-headed, great Lepiota. 6. The great, red Lepiota. 7. The round purple-headed Lepiota. 8. The long-ſtalked, anniculated Lepiota. 9. The great flat-headed Lepiota, with a bulbous, violet-coloured pedicle. 10. The broad, white-

white-headed Lepiota, with an acrid, milky juice. 11. The broad, white-headed, milky, but mild Lepiota. 12. The great, red-headed, ſhort-ſtalked Lepiota. 13. The great long-ſtalked Lepiota, with turning up edges and white lamellæ. 14. The deep, yellow, conic-headed Lepiota. 15. The mouſe-coloured Lepiota, with white lamellæ. 16. The oval-headed Lepiota. 17. The great white varying tree Lepiota. 18. The purple-rimmed, livid Lepiota. 19. The white, duſty-headed Lepiota. 20. The mucous, greeniſh-headed Lepiota. 21. The white, viſcid Lepiota. 22. The little purple, hæmorrhoidal Lepiota. 23. The little flat Lepiota. 24. The hollow and ſtriated-ſtalked Lepiota. 25. The thin-ſtalked Lepiota, with few lamellæ. 26. The purple-ſtalked, yellow-headed Lepiota. 27. The long-ſtalked, milky and acrid Lepiota. 28. The bulbous, brown, acrid, lacteſcent Lepiota. 29. The yellowiſh, acrid, and lacteſcent Lepiota. 30. The tough, purpliſh, acrid, lacteſcent Lepiota. 31. The blackiſh dung Lepiota, with the head ſtriated externally. 32. The little purple dung Lepiota, with the head ſtriated on the upper part. 33. The branched ſilvery Lepiota. 34. The great perennial-rooted Lepiota. Beſide theſe, there are a multitude of other ſpecies of all the principal kinds, differing in colour and other circumſtances. I have figured and deſcribed in MS. of theſe and the other genera of Fungi more than eight hundred, but to give them here would make this volume, not a hiſtory of plants, but a hiſtory of muſhrooms.

FUNGI.

Claſs the Second. Genus the Second.

SOLENIA.

SOLENIA is a genus of Fungus's, conſiſting of a pedicle and a head. The head conſiſts of two parts; the upper one of a fungous texture, the under one tubular. The under part is eaſily ſeparable from the upper, and is compoſed of a great number of ſhort and ſlender tubes, joined ſide by ſide to one another. Theſe tubes are of a cylindric figure, and open at the mouth or under extremity.

The Soleniæ produce male and female fructifications in ſeparate parts of the ſame tubes. The male flowers have neither calyx nor corolla, they conſiſt only of ſtamina and antheræ: the ſtamina are very ſhort, the antheræ oblong and large; they grow to the verge of the tubules, four, ſix, or more in number to each tubule. The female flowers we ſee nothing of, except the ſeeds; theſe are very ſmall and roundiſh, and are diſpoſed in ſeries along the inſide of the tubes.

The heads of the Soleniæ are in general leſs elevated than thoſe of the former genus. They rather reſemble ſegments of ſpheres than cones.

1. *Solenia pediculo bulboſo.*
The bulbous-ſtalked Solenia.

This is a very ſingular Fungus; it grows to four or five inches high, and it's pedicle is more than three inches in diameter. It is of a duſky yellow on the upper part of the head, and of a clearer but ſomewhat greeniſh yellow underneath: the ſtalk is of the ſame colour with the external ſurface of the head. It is bulbous, and as big as a large walnut at the bottom; from this it riſes of the thickneſs of a man's finger to the head: the head is thick and fleſhy, and of a good ſmell and taſte. It's under part is compoſed of extreamly narrow tubules, ſo that it's ſurface appears pierced with innumerable ſmall holes. When it has juſt arrived at it's full ſize, the male flowers may be ſeen at the extremities of theſe holes; and, ſo far as I am able to determine from two or three examinations, ſix of them ſeem to adhere to every tubule: the ſeeds are extreamly minute, and difficultly diſcernible. This ſpecies grows with us in woods pretty frequently. Ray deſcribes it under the name of Fungus poroſus craſſus. He ſays, it is abundantly diſtinguiſhed from all the other Fungus's by it's head being porous, not lamellated underneath. It is probable that Mr. Ray, at the time when he

he wrote this, did not know any other ſpecies of the porous kind; but it is ſomewhat odd, that Dillenius, who adds many other ſpecies of them in the third edition of the Synopſis, ſhould let ſuch a remark ſtand.

2. *Solenia pediculo craſſo, punctato, brevi.*
The Solenia, with a ſhort, thick, punctated ſtalk.

This ſpecies does not grow to more than three inches in height, and it's head is fully as much in diameter. The ſtalk is as thick as a man's thumb, and about as long. The general colour of it is a browniſh yellow, but it is elegantly ſpotted with ſmall dots of purple; it is fleſhy, ſucculent, and of a good ſmell. The head is nearly flat, ſemicircular, and undulated at the edges; it is of an orange colour on the upper ſide, and of a pale yellow underneath, where it is perforated with very large holes, at the extremities of each of which ſtand four antheræ. Within the tubes the ſeeds are eaſily diſtinguiſhable, being conſiderably large for thoſe of a Fungus, and of a globular figure. The plant grows with us in woods, but it is not common. I have met with it once or twice in Cane wood by Hampſtead. Dillenius calls it, Boletus luteus. Micheli, Suillus eſculentus magnus, craſſus, pileolo ſupine fulvo, prone luteo pediculo craſſiore concolore punctis et lituris rubris notato. This author calls all the Soleniæ Suilli, becauſe of the hogs being fond of eating them.

3. *Solenia pediculo ventricoſo.*
The hollow and protuberant-ſtalked Solenia.

This is a very ſingular Fungus. It grows to five inches in height, and it's head is of about two inches in diameter. It's ſtalk, which is the ſingular thing belonging to it, is at the ſurface about a ſixth of an inch in diameter, and hollow. From this part it goes downward two inches or more into the earth, tapering all the way till it terminate in a point; and, as it riſes upwards, it ſwells, till at about the middle of it's height it forms a hollow part of an inch in diameter, and of an inch and half in length; this is of the greateſt thickneſs in the middle, and from it's upper end continues of the ſize of one's little finger to the head. The head itſelf is more elevated than in many other ſpecies of this genus, but it does not run up into a cone, but rather forms a ſegment of a circle. It is of a duſky orange colour on the upper part, and of a brighter yellow underneath. The tubes it is there formed of are moderately large, and at their openings there ſtand ſix antheræ to each. The ſeeds are large for thoſe of a Fungus: a very moderate magnefier will ſhew them in the tubes. The ſtalk is of a browniſh yellow, and is all the way hollow. This ſpecies is frequent in Charlton foreſt in Suſſex. Micheli calls it, Suillus perniciоſus, ſuperne obſcurus, inferne ochroleucus pediculo ventricoſo, ſuperne pileoli parti concolori radice in mucronem longum producto.

The other known ſpecies of Soleniæ are but eight, and will eaſily be diſtinguiſhed by their names. They are, 1. The thick, whitiſh Solenia. 2. The ſmaller, red and yellow Solenia. 3. The brown-headed Solenia, with the under part white. 4. The purple-headed Solenia, with a cream-coloured under ſide. 5. The hairy, yellowiſh Solenia. 6. The great viſcid, yellowiſh Solenia. 7. The long-ſtalked Solenia, with a yellowiſh, red head, white underneath; and 8. The ſhort and ſlender-ſtalked Solenia, with a broad reddiſh head.

FUNGI.

FUNGI.

Claſs the Second. Genus the Third.

PORIUM.

PORIUM is a genus of Fungi conſiſting of a pedicle and a head; the head of which has it's proper ſubſtance, in the under part, pierced with a great number of holes of various ſhapes and dimenſions in the ſeveral ſpecies, and producing diſtinct male and female flowers. The male flowers have neither calyx nor corolla, but conſiſt only of antheræ, affixed to very ſhort ſtamina, and placed round the edges of the holes. The female flowers are placed within the holes: we ſee nothing of them but the ſeeds, which are round, very minute, and placed ſingly on the inner ſurface of the cavities.

The Poria and ſoleniæ both exhibit the ſame appearance of perforations on the under part of the head, but, in the ſoleniæ, what we ſee, as perforations, are the mouths of a multitude of tubes, which conjunctly form a body, eaſily ſeparable from the ſubſtance of the head; whereas, in the Poria, they are mere holes made in the ſubſtance of the head itſelf, and, therefore, are inſeparable from the reſt of it. The holes in the others are generally much deeper than in theſe.

1. *Porium poris minoribus capitulo plano.*
The flat-headed Porium with ſmall pores.

This is a Fungus of no great beauty, but ſingular enough in it's manner of growth. It's pedicle is not more than an inch and an half in length, it's head near three inches over. The pedicle is ſmalleſt at bottom, and gradually grows larger upwards. It is of a ſoft, ſpungy ſtructure, and yellowiſh-brown colour. The head is flat, and undulated at the edges, irregularly protuberant on the ſurface, and rather depreſſed than elevated, where the pedicle is inſerted. It is of a yellowiſh-brown colour on the upper part, and of a greeniſh-yellow on the under, where it is pierced very thick with ſmall and ſhallow holes. The whole Fungus is fleſhy and ſucculent, but of an ill ſmell. It's flowers ſtand four at the mouth of every hole; it's ſeeds are moderately large for thoſe of a plant of this kind, and very numerous, covering the whole inner ſurface and baſe of the holes, and giving the whole a granulated appearance. It is common in ſome parts of England. It grows uſually to the ſtumps of trees in damp places. C. Bauhine has deſcribed it under the name of Fungus anguloſus pediculo exiguo; and Sterbeck, under that of Auricula flammea malchi.

2. *Porium piloſum cavitatibus maximis.*
The hairy Porium with very large cavities.

This is an extremely ſingular and beautiful ſpecies. It ſeldom grows to more than an inch and an half in height, and it's head is about half an inch in diameter. It's pedicle is about an eighth of an inch in diameter, a little larger at the baſe than any-where elſe, and of a browniſh colour. The head is pretty much elevated, but rather ſemicircular than conic in it's figure. It is moderately fleſhy; in colour, of a ferrugineous brown, and hairy at the edges. It's under part is formed into very large, ſhallow cavities, of an angular form, and has ſomething of the reſemblance of a honey-comb in miniature, and is of a white colour. The whole plant has a ſtrong and diſagreeable ſmell. It is frequent, in the foreſt of Dean in Glouceſterſhire, on the branches of old elms and other trees. Micheli has diſtinguiſhed it by the name of Polyporus exiguus, ſubtus rhomboideis foraminibus feneſtratus.

3. *Porium radice ingenti perenni.*
The great perennial-rooted Porium.

This is, perhaps, the moſt ſingular of all the Fungus claſs, and has led as many people into errors as any thing of the vegetable kind.

It's

It's root is of a ſpungy, fungous texture, and increaſes in an inconceivable manner in a very little time, and, as it grows in ſize, it ſurrounds and incorporates into it's body ſtones, ſticks, or any other ſubſtances which happen to be in the way. It is not uncommon to ſee a root of it, of this implicated kind, of two or three feet in diameter, and, with the ſtones it contains, or, at leaſt, connects together, weighing a hundred pounds, or more: it's own matter, however, makes but a ſmall part of this bulk or weight; the ſmaller ſtones, indeed, it ſurrounds ſometimes, and buries in it's ſubſtance; but the larger are ſeldom covered intirely with it, uſually only connected one to another by it. From the various parts of this root, that is, from the ſurfaces of theſe ſtones, where covered with it, and from the crevices between the ſeveral ſtones, filled up with it, grows the Fungus itſelf: this firſt appears in form of an oblong conic body, two or three inches in length, and of about a third of an inch, or more, in diameter at the baſe. It continues in this ſtate ſome time, when it begins, by degrees, to grow tumid at the ſummit, and, by degrees, expands into a complete and perfect head, like that of the firſt deſcribed Porium. The pedicle, upon the whole, is about three inches long, and, by that time the head is fully grown, is larger at the top than at the baſe, contrary to what it originally was: It is ſucculent and white. The head itſelf is about an inch and half in diameter, not elevated, but flat, or ſomewhat depreſſed at the inſertion of the pedicle. It is tolerably thick, and of a ferrugineous colour at the top, and white, and full of ſmall pores, underneath. The whole plant is of a good ſmell, and may be eaten with ſafety.

It is frequent in Spain, Italy, and Sicily, but we have it not in England. C. Bauhine calls it Fungus in ſaxis proveniens; J. Bauhine, Fungus ſupra lapides; and Cæſalpinus, Fungus in lapide fungoſo. The Italians call it Fungo della pietra fungaja. Not only the botaniſts, but the foſſiliſts, in general have claimed it's root to their ſhare; they have taken it to be a very ſtone, and there is ſcarce a book on that ſubject, except our own, in which it is not deſcribed as a mineral, under the name of Lapis fungifer. They have ſuppoſed the whole congeries about the root of this plant a maſs of natural ſtone, and have celebrated it as a peculiar ſpecies of foſſil, which had the ſingular property of producing muſhrooms, which they aſſure us it will at any time do on being watered, or laid in a damp place.

The other ſpecies of Porium will eaſily be diſtinguiſhed by their names: they are, 1. The ſmall, white, coriaceous Porium. 2. The grey, lacerated-headed Porium. 3. The ſmall Porium, with an inverted head in form of a cup. 4. The yellowiſh, funnel-ſhaped Porium. 5. The little, ſhort-ſtalked Porium, with yellowiſh, calyculated heads. 6. The ſmall-headed Porium, with extremely minute pores. 7. The ſmall, blackiſh Porium, with very ſmall pores. 8. The branched, pale-yellow Porium.

FUNGI.

Claſs the Second. Genus the Fourth.

ACONTIA.

ACONTIA is a genus of Fungus's, conſiſting of a pedicle, ſupporting a head, the under part of which is formed into a multitude of little ſpiculæ, or ſhort, conic, pointed bodies, like teeth; and producing male and female flowers diſtinct. The male flowers have neither calyx nor corolla, but conſiſt of a ſingle anthera, of an oblong figure, affixed to a very ſhort ſtamen. The female flowers we ſee no part of, except the ſeeds; theſe are ſingle and roundiſh, and both theſe, and the antheræ, adhere to the ſurfaces of the ſpiculæ, at the bottom of the head, but they adhere to different parts of them. The generical name is formed of the Greek ακοντιον, ſpicula.

1. *Acontia album craſſum.*
The white, thick Acontia.

This is a very delicate-taſted Fungus. It grows to the height of about four inches. It's pedicle is very thick throughout, but more ſo near the bottom than elſewhere. It

has a kind of bulb near that part, of the bigneſs of a walnut, from which it terminates downward in a ſort of blunt cone, and goes up, of the thickneſs of a man's thumb, till near the head, where it ſwells out again. It is of a whitiſh colour, ſucculent and tender. The head is about two inches and a half in diameter; it is thick, fleſhy, and undulated at the edges. It is not at all elevated in the center, but often rather depreſſed. It is thinneſt at the edges, and is, throughout, ſmooth on it's upper ſurface. On the under part it is formed into a multitude of little ſpiculæ, of a conic figure, and of about a ſixth of an inch in length. The whole plant is of a whitiſh colour, and of a good ſmell. The flowers ſtand ſingly on the upper parts of the ſpiculæ, and the ſeeds afterwards appear on the lower.

This ſpecies is a native here, but it is not common. I have met with it in Charlton-Foreſt in Suſſex in October. We do not eat it, but in Italy, where it is more common, it is brought to market for that purpoſe. J. Bauhine calls it Fungus pœne candidus, prona parte erinaceus.

2. *Acontia cyathiformis coriacea.*
The tough, hollow Acontia.

This is a very ſingular ſpecies. It riſes from the earth with a pedicle of an inch, or ſomewhat more, in length, and about a fifth of an inch in thickneſs, tolerably tough, and of a yellowiſh-brown colour. On the top of this ſtands a head, of the ſhape of a hollow, inverted cone, or of a common drinking-glaſs. It is near an inch and half in height, and as much in diameter at the top, from whence it deſcends gradually ſmaller to the baſe, where it ends of the thickneſs of the pedicle. This head is throughout of a duſky, ferruginous yellowiſh colour. It's plain ſide is marked with a number of parallel circles, and covered with a fine ſoft down; it's other ſide, which, in the condition it is in, in this hollow ſtate, is it's outer one, is covered with ſhort ſpiculæ, or points; they are broadeſt at the baſe, and ſmall at the extremity, and are not more than the tenth of an inch in length. About theſe hang the antheræ and the ſeeds of the plant: the former are oblong, the latter round, and extremely minute. The whole plant is tough, and of a very bad ſmell. It is found in our woods, but not very common. I have met with it in Leiceſterſhire, and have received ſpecimens of it from Yorkſhire; elſewhere I have not heard of it. Sterbeck deſcribes it under the name of Fungus campanulatus lignoſus.

3. *Acontia pediculo teneriore.*
The thin, tender-ſtalked Acontia.

This is extremely different in it's general form from all the other ſpecies of this genus. riſes from the ground with a ſmall, fine, and tender pedicle, two inches high, as thin as a ſmall packthread, and of a pale browniſh-yellow colour. On the ſummit of this ſtands a head of about half an inch in diameter, and of a ſemiorbicular figure. It is ſoft and hairy, of a pale yellowiſh-brown colour, and of an uneven ſurface. The hollow, or under part, is thick ſet with oblong, conic ſpiculæ, on which ſtand the antheræ and the ſeeds. It is a very elegant little plant, but of an ill ſmell. It is not a native of England, but in the woods in the Eaſt Indies it is common. Breynius calls it Fungus, non veſcus echinatus, minor, hirſutus, pileolo ſemiorbiculari fuſco.

The other ſpecies of this genus are not numerous, and they will eaſily be diſtinguiſhed by their names: they are, 1. The pale-yellow, eſculent Acontia. 2. The browniſh-yellow, large, diſcoide Acontia. 3. The coriaceous, ferrugineous, ſmall Acontia, growing in cluſters. 4. The black, ramoſe Acontia. 5. The yellowiſh Acontia, with grey, oblong teeth. 6. The ſquammoſe, black-headed Acontia. 7. The black, funnel-faſhioned, tough Acontia.

FUNGI.

Class the Second. Genus the Fifth.

LEOTIA.

LEOTIA is a genus of Fungi, consisting of a pedicle and a head: the head is plain on it's upper surface, and neither porous, lamellated, nor echinated in it's under one, but perfectly smooth, and produces separate male and female flowers; the male flowers consisting only of single antheræ, affixed to every short filament, and the female flowers having no part visible, except the seeds, which are small and round. These male and female flowers are placed on the different parts of the same surface of the head, sometimes on the upper surface, and sometimes on the under.

1. *Leotia tenerior elatior capitulo cavo.*
The tender, taller Leotia, with a hollow head.

This is a very delicate and beautiful species; it grows to two inches, or more, in height, and it's head is not more than a quarter of an inch in diameter. The pedicle is as fine as a hair, white and pellucid. The head is of an obtusely conic form, and has no pores or lamellæ, but is perfectly smooth in it's under surface. The pedicles are scarce able to support the weight of these little heads, but bend and totter under them on the least motion. The whole plant is of a snow-white colour, and extremely tender. It is a very difficult object to manage for the microscope, but, if properly examined, a dusty matter will be found on the under side of the head, composed of globules of two kinds, oblong and round, which are evidently the antheræ and the seeds.

This species is common with us in the hollows of rotten trees, and on decayed leaves: I have often met with it on old ash-leaves on Primrose-hill near Hampstead. Ray calls it Fungus minimus candidus absque lamellis.

2. *Leotia parvula capitulo plano.*
The little Leotia, with a flat head.

This is a very minute Fungus; it does not grow to more than a third of an inch in height, and it's head is somewhat less than that in diameter: it is, however, very distinct in all it's parts, and a very beautiful species. It's pedicle is thin, and of a whitish colour, and is all the way up of the same bigness: the head is perfectly flat, and is as smooth on one side as on the other; the edges of it sometimes turn up a little. The whole plant is white, and has a disagreeable fungous smell. The lower surface of the head, examined with a good microscope, shews a number of minute bodies scattered over it, part of which are oblong, part roundish; the former are evidently the antheræ, the latter the seeds. This little Fungus is common on rotten wood in Charlton-forest, and in many other places. Micheli calls it Fungoidaster minimus discoides albus.

3. *Leotia gelatinosa capitulo subviridi.*
The gelatinous Leotia, with a greenish head.

This is a very singular and beautiful Fungus: it grows to about an inch and half in height, and it's head is about an inch in diameter. It's pedicle is of the thickness of a sixth of an inch, hollow ridged on the surface, and of a fine gold-yellow. It is smallest at the bottom, and grows larger towards the top, where it expands into a kind of head, depressed at the center, and round at the edge; the rims turning in: this head is of a greenish colour, and covered with a gelatinous humour on the surface. It's under part is perfectly plain and smooth, and the antheræ and seeds are found scattered over it in form of a fine dust. We do not meet with this in England, but it is very common in France and Italy. Vaillant calls it Fungus gelatinosus flavus. It is of a tender and succulent structure, and of a disagreeable smell.

The

The other ſpecies of Leotia are, in general, very ſmall; they will eaſily be diſtinguiſhed by their names. They are, 1. The ſcarlet little Leotia, with ſemiorbicular heads. 2. The browniſh Leotia, with roundiſh heads, and ſeeds on the outſide. 3. The little, round-headed Leotia, found on decayed horſes hoofs. 4. The capillaceous, brown, dwarf Leotia, with half-round heads. 5. The horſe-dung Leotia, with round heads, marked with black ſpots. 6. The duſky, cat's-dung Leotia. 7. The ramoſe, whitiſh, cat's-dung Leotia. 8. The black, pin-headed Leotia; and 9. The beautiful purple Leotia, with round heads.

F U N G I.

Claſs the Second. Genus the Sixth.

DICTYARIA.

DICTYARIA is a genus of Fungi, conſiſting of a pedicle and a head, the head of which is reticulated on the outer ſurface, and ſmooth on the inner; producing male and female flowers ſeparate, both on the external ſurface of the head. The male flowers are ſingle antheræ, affixed by ſhort ſtamina to the ridges which make the reticulation of the head; and the female flowers ſhew no part of themſelves, except the ſeeds, which are ſcattered ſingly on the ſurface of the hollows between the reticulations. The heads in this genus never ſtand out far from the ſtalks; and in ſome of the ſpecies they are faſtened to them at the bottom, and do not ſhew any cavity underneath, till cut open. Micheli makes three genera out of this one, by uſing, as generical diſtinctions, ſuch as are only ſpecific ones: Linnæus comprehends all the ſpecies, as we do, under one genus; but he calls this genus Phallus, a name very well adapted to two or three of the ſpecies, but not at all to any of the others. Tournefort alſo calls them all Boleti; but, as Phallus is not general enough, and Boletus has been uſed by other writers in other ſenſes, we have given the genus the name Dictyaria, from the Greek δικτυον, rete, a net.

1. *Dictyaria capitulo clauſo ovato.* The Oval.

The Dictyaria, with an oval head faſtened to the ſtalk at the bottom.

This is a very well known and very much eſteemed Fungus. It grows to three or four inches high, and it's head, which frequently takes up more than half it's height, is an inch and half in diameter; it's pedicle is irregularly ſhaped, uſually ſomewhat larger at the bottom than in any other part, and often ſomewhat protuberant in the middle. It is of a pale browniſh colour, and ſufficiently robuſt and ſtrong. The head appears to be a ſolid oval body, of a reticulated ſurface, affixed to the top of this pedicle; but, on opening it, the pedicle is found to go up to the ſummit, and the head to be there fixed to it, and hollow and looſe from it all the way down to near it's baſe, where it is again connected with it all round. The inner ſurface is tolerably ſmooth, but the external one is reticulated in a beautiful manner by very prominent ridges, which, uniting and ſeparating again at ſmall diſtances, form a kind of irregular cells, of various figures and diameters. The ridges of the head are of a duſky deep brown, the intermediate ſpaces of a pale brown, like the ſtalk. The ridges, carefully examined, will be found, when the Fungus is juſt ripe, to be covered, as it were, with antheræ; they are extremely minute, and of an oblong figure, and ſtand ſingle. The ſeeds are alſo very minute and round, and are ſcattered ſingly over the ſurface of the hollows between the ridges. The whole Fungus is of a ſtrong but agreeable ſmell. It grows under hedges, and in the bottoms of dry ditches, in ſpring, and, in ſome parts of England, is very common. The botanical writers have all deſcribed it: J. Bauhine calls it Fungus rugoſus vel cavernoſus; and C. Bauhine, Fungus poroſus eſculentus. Tournefort, Boletus eſculentus rugoſus amplior et orbicularis.

2. *Dichtyaria*

2. *Dictyaria capitulo conico aperto, pediculo bulboſo.*
The bulbous Dictyaria, with a conic, open head.

This is a very ſingular Fungus, and not leſs valuable at table than the morel, of which it has the flavour, and all the other qualities. It grows to four or five inches high, and it's head is, at the baſe, not leſs than two inches in diameter. It's pedicle is bulbous at the bottom, and from thence runs up to the head, of the thickneſs of a man's finger. It is ſucculent and hollow, and uſually is ſomewhat ſcabrous on the ſurface; it's colour is a duſky brown. The head is of a conic form, terminating at top in a tolerably ſharp point; it's ſurface is reticulated, like that of the former, but the ridges are thicker and more prominent, and the cavities between them deeper and larger. The colour of the head is a duſky brown; the ridges are deeper coloured than the intermediate ſpaces, and the inner ſurface deeper coloured than either. The ſurface of the reticulations is duſty, as the Fungus grows toward ripening, and the microſcope ſhews this duſt to be antheræ of an oblong form, with ſcarce any viſible pedicles. The ſeeds are oval and larger than in the former; they lie in the cavities between the ridges. We have not this ſpecies in England, but it is common in Germany, and is ſometimes brought to market in Italy. Micheli deſcribes it under the name of Phalloboletus eſculentus pileolo conico, pediculo cavo, leucophæo.

3. *Dictyaria capitulo minore umbilicato perforato.*
The Dictyaria, with a ſmall unbilicated, perforated head.

Phallus.

This is one of the moſt ſingular plants of the Fungus kind. It's firſt appearance is in form a rudely globular body, of a white colour, with an oblong, crooked, ſingle root, which penetrates into the earth, and faſtens it to it. After a little time this globular body expands into five or ſix laciniated ſegments, which are thick and fungous, and, when cut, are found to conſiſt of two pretty thick membranes, with a glutinous ſtinking matter between them. In the center of theſe ſegments there ſtands a kind of cup of a tough fungous matter, half an inch high, nearly as much in diameter, and irregularly dentated about the edges. From this cup there riſes a thick ſtalk, ſmalleſt at the baſe, where it is inſerted into the cup, but larger a little higher up; it riſes to four or five inches in height, and is about three quarters of an inch in diameter, and ſomewhat rough on the ſurface. On the top of this pedicle ſtands a ſmall head, a little more than an inch long, and about an inch in diameter. It is of a conic form, reticulated and callous on the ſurface, and has an umbilicus or hollow membrane at the top, in the center of which there is a perforation which goes down into the hollow of the ſtalk. The ſtalk, when cut, is found to be only a thick membrane, ſurrounding a vaſt hollow, capable of admitting a man's finger, and reaching down to the very baſe, where it is cloſe. The ſtalk grows taper, where it is covered by the head, as well as where it is inſerted into the cup at the baſe, but the rim of the head ſcarce ſtands out at all from it. The ridges of the head are covered with a duſty matter, which is compoſed of the antheræ; the ſeeds lie in the cavities between, but they are very ſmall and difficult to be ſeen; in time the callous matter of the head melts into an extreamly fœtid, glutinous liquor, which, dropped into water, blends with it, and lets fall to the bottom a quantity of round ſeeds, which it was carrying to the earth. The whole plant is white, and of a moſt extreamly fœtid ſmell.

It is found in many parts of England in great abundance. I have met with it on the ſides of Mendip hills in great plenty, and about Catthorp in Leiceſterſhire. Moſt of the botanical writers have deſcribed it. J. Bauhine calls it, Fungus phalloides; and C. Bauhine, Fungus fœtidus penis imaginem referens. Tournefort calls it, Boletus phalloides. It is found in Auguſt, September, and October, rarely later.

It has a multitude of creeping filaments, which run various ways under the ground, and from which the ſingle oblong roots, which grow to the globular bodies, which are the firſt appearance of this Fungus, ariſe.

The other ſpecies of the Dictyaria will be eaſily diſtinguiſhed by their names. Thoſe of the morel kind, with the heads cloſed at bottom, are, 1. The whitiſh, eſculent, rough-ſtalked Dictyaria. 2. The yellowiſh, ſmall-headed Dictyaria. 3. The conic-headed, dark, purpliſh Dictyaria. 4. The greyiſh, green Dictyaria, with a very thick pedicle.

Of the open-headed kind are, 1. The great curled-headed Dictyaria, with a grey

pedicle. 2. The little conic-headed Dictyaria, with a grey ſtalk. Of the phallus kind, or thoſe with volvæ at the baſe of the pedicle, are, 1. The ſmaller Dictyaria, with a purple volva. 2. The little-headed Dictyaria, with a great umbilicus. 3. The pale, yellow Dictyaria, with a head ſuppoſed to be without a perforation in the center. 4. The ſmall, oblong Dictyaria of Virginia. 5. The rough-headed, not umbilicated Dictyaria. Theſe three laſt are indeed all ſaid not to be perforated at the top, but the deſcriptions of them are in other reſpects ſo imperfect, that we are not to pay too much credit to this particular.

FUNGI.

Claſs the Third.

Such as grow erect, and have no heads.

Genus the Firſt.

CLETHRIA.

CLETHRIA is a genus of Fungus's, conſiſting of a reticulated ſubſtance, or of ramifications frequently uniting one with another, formed into a roundiſh or oval body, and in ſome meaſure reſembling the head of a morel, with the inner ſubſtance cut out, and only the ridges which form the reticulation left: it is produced from a volva in the manner of the phallus, and ſome other of the Dictyariæ, and produces diſtinct and ſeparate male and female flowers.

The male flowers are ſingle Antheræ without any filaments, very ſmall, but of an oblong figure, and adhere to the ſides of the reticulations.

Of the female flowers we can diſtinguiſh nothing, except the ſeeds, which are very ſmall and round, and are contained in a maſs of a ſoft matter, glutinous, and of a grey colour, a vaſt lump of which is contained within the hollow of the plant, while in the volva, which, as it grows up, reſolves into a thick fœtid liquor, and carries away the ſeeds with it.

There is ſo great an analogy between the Clethriæ and the Dictyariæ, that the having and not having a head ſeems the great difference. Micheli calls this genus Clathrus; we, from the ſame Greek, κληθρον, a lattice, Clethria.

1. *Clethria ovata reticulationibus craſſis.*

The oval Clethria, with thick reticulations.

This is one of the greateſt beauties of the Fungus claſs. It's root is oblong and ſlender, divided into ſeveral ramifications, and penetrating five or ſix inches deep into the earth; from this there ariſes a little tuberous body of a duſky purpliſh colour, and of a rough ſurface; this enlarges by degrees, till it become of the bigneſs of a walnut, and of a roundiſh figure. Soon after this, it's outer membrane divides irregularly into four or five broad ſegments, and within theſe ſtands a globular body hollow, and conſiſting of ramifications variouſly diſpoſed, and joining one with another, ſo as to form a kind of lattice-work. The cavity of this body is at this time filled with a ſubſtance of a gelatinous nature, but with a mixture of a duſty matter in it. The outer membrane remains in it's ſegments, and forms a kind of cup; and the globular latticed body extends by degrees, carrying up a part of the maſs, which before filled it, on the inner part of it's ramifications, the reſt remaining at the baſe. The body of the Fungus is now no longer filled with any thing, but is hollow, empty, and compoſed only of this ſhell of lattice-work; in this ſtate it acquires an oval figure inſtead of its round one, being ſmalleſt at the baſe, and growing gradually larger to the top; in this ſtate it makes a moſt beautiful appearance, the ramifications of which it is compoſed are of about a third of an inch in diameter, and they form irregular holes between them, oblong, angular, often rhomboidal, and capable of admitting a man's finger. The calyx or volva at the baſe is of a duſky purple colour; all the reſt of the plant of a fine red, ſpotted within with purple; as the plant riſes in height, the ramifications are to be examined to find the antheræ, which then adhere to them in form of a fine powder. The glutinous matter which once filled the hollow of the plant, and which contains the ſeeds at this time alſo, melts into a thick, viſcid, and very ſtinking liquor, and this runs out at the cavities between the ramifications, in form of large drops. The beſt me-

thod

thod of finding the ſeeds is to drop this into water, on which the liquor blending with the water, the ſeeds fall to the bottom; they are very ſmall and round. The whole plant, though of ſo beautiful a colour, is of a very fœtid ſmell. Moſt of the botanical writers have deſcribed this ſpecies. Tournefort calls it, Boletus cancellatus purpureus. C. Bauhine, Fungus ruber cancellatus. Cæſalpinus, Fungus quem ignem ſylveſtrem vocant; and Cluſius, Fungus coralloides cancellatus. It is frequent in Italy, but is not found with us.

2. *Clethria rotundior ramificationibus tenuioribus.*
The rounder Clethria, with ſmaller reticulations.

This is a very beautiful ſpecies, tho' leſs ſo than the former. It riſes from a thin and membranous volva, and conſiſts of ramifications of not more than a fifth of an inch in thickneſs, flatted and joining ſo frequently, as to make very ſmall reticulations. The whole plant is white, but ſpotted on the outſide with red, and is round in figure: the cavity of it, while young, is filled with a white, ſpungy, glutinous matter, which afterwards runs off in a fœtid liquor as in the former ſpecies, and the ſides of the ramifications are in the ſame manner furniſhed with antheræ. Micheli calls this, Clethrus olivaris. Ray, Fungus pro capitulo laminam longam, latam, multipliciter laciniatam, et convolutam habens, albam, intus punctis rubris creberrimis pictam, calyceſquammoſo exceptam. Names of this length we hope will reconcile the reader to our new generical terms, ſince there is no other means of ſhortening them. This ſpecies is common in Germany. It is produced alſo in Italy but rarely. We have it not at all in England.

3. *Clethria flaveſcens ramificationibus compreſſis.*
The yellow Clethria, with flatted ramifications.

This is another very beautiful ſpecies. It riſes like the others from a membranous volva or caſe, and grows to the ſize of a large pear, and much reſembles that fruit in ſhape. It is compoſed of flat ramifications, of the breadth of a quarter of an inch, and of about half that meaſure in thickneſs. Theſe join frequently ſo as to give the whole a reticulated form, and compoſe a ſort of open caſe. The whole plant is of a fine bright yellow colour, and has antheræ on the edges of it's ramifications, and a glutinous matter ſurrounding the ſeeds in it's cavity, while young, which as it grows up melts into a fœtid water, containing the ſeeds in it.

It is a native of Germany, France and Italy, but not of England. Tournefort calls it, Boletus cancellatus; and Barrelier, Fungus coralloides cancellatus flaveſcens. Theſe are all the known ſpecies of this ſingular genus.

FUNGI.

Claſs the Third. Genus the Second.

ARCYRIA.

ARCYRIA is a genus of fungus's, conſiſting of a head of a reticulated ſtructure, not hollow, ariſing from a caſe or volva, and containing diſtinct male and female flowers: The male flowers conſiſt only of oblong antheræ, arranged by fours together, on the ſummit of the ſame filament, which adheres to the ridges of the reticulation: The female flowers we ſee no part of, except the ſeeds which are ſmall, of an oval figure, and lie in the cavities of the reticulations. The ſpecies of Arcyria hitherto diſcovered are all ſmall ones, and they require the aſſiſtance of a good microſcope to diſtinguiſh their fructifications with accuracy. Micheli has divided the genus into two, by uſing ſpecific diſtinctions in the place of generical ones. He calls them Clathroides and Clathroidaſtrum, from their more or leſs reſemblance to the Clethria, or Clathrus before deſcribed. We call them Arcyria, from the Greek, αρκυον, a net.

1. *Arcyria pediculo in volvam expanſo.*
The Arcyria, with it's pedicle expanded into a cup.

This is a very elegant little plant. It's firſt appearance is in form of a little round-headed Fungus, with a ſlender pedicle, in which ſtate it has been deſcribed by

by more than one author, under the name of a Fungus non lamellatus. Micheli was the firſt who gave an account of it in it's more perfect and mature ſtate.

It riſes firſt from the ſubſtance it grows on with a pedicle, as fine as a hair, of about a ſixth of an inch in height, and terminated at it's top by a round globule; in this ſtate I have known it continue two months, ſo that they are ſomewhat excuſable who took this for its ultimate one. After it has continued it's due period in this form, the globule opens gradually at the head, and forms a volva or caſe like the cup of an acorn, in miniature, but of a ſomewhat more conic form. In the bottom of this is ſeen a granule of a rough ſurface; this by degrees expands and fills the cup, and in a little time after ſtands as much above it's ſurface, as is the whole length of the plant beſide. This head, when full grown, is of an elliptic form, thicker than the cup it proceeds from in it's middle part, and growing ſomewhat ſmaller toward the ſummit, as well as toward the baſe. It is not hollow, but is throughout of a reticulated texture. The ramifications, which form the reticulation, are very ſmall, and variouſly interwoven; on theſe ſtand the antheræ, four on each common filament, and within the cells are the ſeeds.

The whole plant, in it's utmoſt growth, does not exceed half an inch in height, and it's head, in the thickeſt part, is not more than a fifth of it's height in diameter; the head is of a duſky purple colour, the pedicle browniſh. It is frequent in Charlton foreſt in Suſſex, growing to the ſurface of rotten ſticks that lie on the ground. I have not met with it elſewhere, but doubt not but it is frequent enough, only overlooked from it's ſmallneſs. Micheli, who firſt diſcovered it, calls it Clathroides purpureum pediculo donatum.

2. *Arcyria ſeſſilis volva longiore.*
The ſeſſile Arcyria, with a longer volva.

This is a ſtill ſmaller plant than the former, ſcarce ever exceeding a quarter of an inch in height, in it's utmoſt perfection. It's firſt appearance is in form of a ſmall, purpliſh tuberoſity, of an oval figure, adhering by it's ſmaller end to the ſubſtance it grows on. After it has been in this ſtate ſome time, the upper part of it opens, and it by degrees expands into a cup or volva of an oblong conic figure, ſtill adhering by it's lower part, and not raiſed on a pedicle, as the volva of the former ſpecies. From the cavity of this volve there ariſes a protuberance, which in time becomes a head of an oblong elliptic figure, and of the ſame reticulated ſtructure, and the ſame fructifications, with the former. The whole plant is of a purpliſh colour, with a tinge of ſcarlet, and makes, when cloſely examined, a very pretty appearance. It is common on dead ſticks in Charlton foreſt in Suſſex. I once alſo found a great deal of it in one of the woods in Kenſington gardens. Micheli calls it, Clathroides purpureum pediculo carens.

3. *Arcyria pediculo ad apicem capitis producto.*
The long, pedicled Arcyria, with the ſtalk penetrating the head.

This is the largeſt known ſpecies of this genus. It grows to an inch or a little more in height, but what it has in height over the former ſpecies, it wants in colour, they being both of a beautiful purple, this of a duſky brown. It riſes with a very ſlender pedicle naked, and of more than a third of an inch high; at the top of this ſtands a little globular tubercle, ſcarce larger than the head of a pin, which ſoon opens, and, as ſoon as it is open, falls off from the ſtalk, and leaves no mark of any thing having been there. In the place of this membrane there is ſeen a little oblong body of a granulated ſurface, which by degrees grows into an head of an oblong form, like thoſe of the former, and of the ſame reticulated texture, but with the pedicle continued ſtrait up all the way through the center of it to the very ſummit, and viſible all the way in form of a ſlender black filament, like a horſe-hair, only vaſtly ſmaller. The ſubſtance of the head is of the ſame reticulated matter with thoſe of the others, and the fructifications are the ſame in it. The ſtamina arranged along the ramifications ſuſtain each four antheræ, and the interſticial cavities have the ſeeds arranged four by four in them. I found, laſt year, more than a thouſand plants of this in a cluſter, in a crack of an old water-pipe, near Iſlington. I have alſo ſeen it in Charlton foreſt, and in Cane wood near Hampſtead.

The other ſpecies of Arcyria will eaſily be diſtinguiſhed by their names: they are, 1. The yellow Arcyria, without pedicles. 2. The black, very ſmall Arcyria, with ſhort pedicles. 3. The deep, brown Arcyria, with ſhorter heads.

FUNGI.

Claſs the Second. Genus the Third.

LYCOPERDON.

LYCOPERDON is a genus of Fungi, conſiſting of a globular or oval body, ſometimes ſeſſile, ſometimes elevated on a thick pedicle, and covered with a volva in form of an external ſkin, which uſually remains entire, till the plant is full grown; and producing ſeparate male and female flowers, both contained in the cells of a fungous ſubſtance. The male flowers conſiſt of oblong, antheræ, very minute cluſters of which are affixed to the ſame filament, which adheres to the ſides of the cells. The female flowers are placed in the cavities of a reticulated placenta, which fills up the greater part of each cell, in the ſpungy matter of the plant: we can diſtinguiſh no part of them, but the ſeeds which are very minute and round.

There is no genus of Fungi which requires ſo much attention as this, in order to the diſcovering it's fructifications; in ſome of the ſpecies they are ſo ſmall, as ſcarce to be diſtinguiſhable at all; in others they are more viſible; but, in the very eaſieſt of obſervation, a ſhort period only is allowed for the examination. The ſpungeous ſubſtance, which fills the plant, remains a long time confuſed, and the fructifications not formed; and when they are formed, and the cells diſtinct, it is but a very ſhort time before the very matter of the cells breaks to powder, and the ſeeds fall out of the cavities of the placentæ, which themſelves alſo ſoon after diſunite into the fine ſhort filaments they were compoſed of, and the whole matter, powder, ſeeds, and filaments together, are diſcharged in form of a fine duſt, through the aperture deſtined for that purpoſe in the head of the Fungus.

The accounts we meet with of perfect Fungus's of the ſame kind, diſcovered in the particles of the powder within theſe Fungi, is erroneous. What theſe obſervers have taken for little fungus's, has been the placentulæ of the cells not yet diſunited: in this caſe they are a kind of rough oval bodies, which may be miſtaken for compleat Fungi of the ſame kind, by people who do not know that the plant ariſes regularly from a roundiſh ſeed, and does not appear itſelf in it's perfect form, till long after the firſt ſhooting of that ſeed.

Micheli, who has gone ſo far toward the diſcovering the fructification of this genus of plants, as to diſcover the placentulæ, which he calls glebulæ, with their ſeeds, in ſome of the ſpecies, divides this genus into four, according to the common error of taking ſpecific diſtinctions for generical ones. He calls theſe by the names of Lycoperdon, Lycoperdoides, Lycoperdaſtrum, and Geaſter. The laſt of theſe has been received alſo by many others as a diſtinct genus, but without ſufficient foundation: the radiated matter at the bottom of the body, which diſtinguiſhes this genus, as it is called, is no other than a volva thus divided; and all the Lycoperdons have volvæ, which in the ſeveral ſpecies approach more or leſs to that form, in ſome approaching ſo near it, as to diſpute the title with the allowed geaſters.

1. *Lycoperdon volva glabra evanida pediculo craſſiſſimo.*
The thick-ſtalked Lycoperdon, with a periſhing volva.

This is the ſpecies of Lycoperdon in which, more than in all others, the fructification is diſtinguiſhable. It is one of the largeſt of the pediculated kinds, growing to eight or ten inches high, and it's pedicle an inch and half in diameter. It's root is very large, and divided into ſeveral fibres, thick, ſhort, and pointed at the ends: from this there firſt ariſes a large, tuberous body, covered with a ſmooth and very thin volva, in form of an outer membrane: this burſts, as the plant ſhoots up, and ſoon diſappears. The plant then riſes erect, with it's thick pedicle, which is ſpungy within, but not hollow: at the top it diſtends into a head, of the bigneſs of a large apple, which has a perforation at the ſummit, thro' which the ſeeds, and other contents, are diſcharged, when ripe. This head cut open, while too young, is found to contain only a ſpungy matter, white, and of no regular ſtructure; but, if carefully watched, and opened, juſt when the ſeeds

are ripening, this ſpungy matter is found then to have formed itſelf into cells of an irregularly angular form, but principally oblong; and, at the ſurfaces of theſe, may be found filaments, each ſuſtaining eight or ten antheræ: the internal part of the cells, at this time, contains a ſhapeleſs lump, nearly filling them; after a very little time more, this ſhapeleſs matter is found to be a cellular placenta, formed of a multitude of fibres, elegantly arranged in a reticular manner, with membranes between; and, in the cells of this placenta, lie the ſeeds, in the ſame number with the antheræ, or thereabout. The membrane which covers the head is conſiderably thick, and is compoſed of two others, united ſo cloſely to each other, that they appear to make but one maſs.

This ſpecies is found on ſome of our heaths, and ſometimes in woods. On Hindhead in Suſſex it grows very abundantly, and in ſome places about Goodwood. Micheli has deſcribed it under the name of a Lycoperdioides: it is in perfection in September.

2. *Lycoperdon pediculo brevi globulari volva perſiſtente echinata.*
The ſhort-ſtalked, globular Lycoperdon, with an echinated, permanent volva.

This is a very pretty ſpecies, when the volva is entire. It appears merely globular and ſeſſile, as ſeen upon the ground; but, when taken up, it is found to have a ſhort and thick pedicle. This is not more than half an inch in length, before it expands into the globular body, which is uſually of the bigneſs of a hen's egg, ſometimes conſiderably larger, and is formed, as the heads of all the pediculated Lycoperdons are, of one continued ſet of membranes with the pedicle. It's ſurface is all over covered with ſhort conic bodies, terminating in points; theſe are protuberances of the membrane, which forms the volva, and this membrane itſelf is very thin, and connected ſo cloſely to the next under it, that it ſeldom ſeparates, till the Fungus is perfectly ripe, and then falls off by piece-meal. Under this is a thicker and tougher membrane, and under that another, which immediately incloſes the ſpungy matter in which the fructifications are lodged. The ſurface of the whole plant is of a pale, whitiſh-brown colour; the ſpungy ſubſtance itſelf is at firſt perfectly white, but afterwards it becomes of a greeniſh-yellow, and is regularly cellular, containing antheræ and ſeeds, lodged in their placentulæ, though very difficultly diſtinguiſhable. The pedicle is faſtened to the ground by a few fibroſe roots, and, at the top of the Fungus, there is an aperture, out at which the ſeeds, &c. are diſcharged. This ſpecies is very common in our dry paſtures, and on heaths. J. Bauhine calls it Fungus pulverulentus dictus crepitus lupi vulgaris; and C. Bauhine, Fungus orbicularis.

3. *Lycoperdon pediculatum volva hirſuta lacera.*
The pediculated Lycoperdon, with a hairy, lacerated volva.

This grows to three inches in height, and it's head, which is globular, to about an inch and quarter in diameter. It appears firſt on the ſurface of the earth in form of a roundiſh ball, connected to the earth by four or five ſhort filaments: by degrees it riſes to it's full dimenſions. It's pedicle is as thick as a man's finger, and, at the top, expands into the globular head. It arrives at this it's full height, while yet covered with it's volva, which is a membrane moderately thick and tough, of a duſky-brown colour, and hairy: ſoon after this, however, as the head begins to ſwell yet more, the volva, or outer membrane, burſts into three or four parts, which are divided down to the middle of the ſtalk, and hang from it almoſt to the ground, with ragged edges, and lacerated extremities. The head, and part of the pedicle, now naked, are whitiſh and ſmooth on the ſurface, and on the ſummit there appears an aperture, out at which the ſeeds are to be ſoon after diſcharged. The head is full of a ſpungy ſubſtance, which, as it ripens, is divided into cells, containing the antheræ and placentulæ, with their ſeeds, as in the reſt. The ſpungy ſubſtance is white at firſt, but afterwards of a greeniſh-yellow. The plant is common in our paſtures in autumn. Ray deſcribes it under the name of Fungus pulverulentus major pediculo longiore ventricoſo.

4. *Lycoperdon globulare volva multifida glabra.*
The globular Lycoperdon, with a multifid, ſmooth volva.

This ſpecies of Lycoperdon approaches ſo nearly to the ſtellated kind called geaſter, and yet is ſo evidently a common Lycoperdon, that we are apt to believe every body will

will be convinced by it, that geaſter is not a genus ſufficiently diſtinct from Lycoperdon. It grows to the bigneſs of a large apple, and is of a tolerably regular, globular figure. It is fixed down to the earth by a great tuft of filaments, and from theſe it at firſt riſes in form of a little globule, of the ſize of a nut. It grows very quick, however, and, in two or three days, is arrived at it's full maturity. It is, at firſt, covered with it's volva in form of an outer membrane, and it continues to be ſo, till nearly of it's full bigneſs. When full grown, there appears in the center a kind of commiſſure, from which, ſoon after, the volva, or outer membrane, begins to crack. It then divides into ſix or eight regular ſegments, which are ſmooth at the edges, broad at the baſe, and terminate in points, and in all things reſemble the geaſter, or ſtellate Lycoperdon, except that they are not divided to the baſe of the plant, and, conſequently, cannot lie expanded on the ground, but turn their points outwards. The top of the Fungus, uncovered, appears ſmooth, and of a greyiſh-white colour, and ſoon after opens at the top, and diſcharges the ſeeds. The ſpungy ſubſtance contained in this head is at firſt of a bluiſh colour, but it afterwards becomes white. The fructifications are the ſame in it as in the other ſpecies. We have this Lycoperdon with us on heaths, but not common. I have met with it in Suſſex and in Derbyſhire in two or three places. Micheli deſcribes it under the name of Lycoperdaſtrum rotundum majus leucophæum pulpa ſordide cærulea.

5. *Lycoperdon volva ſtellata radiis lanceolatis oſculo fimbriato.*
The ſtarry Lycoperdon, with lanceolated rays, and a fringed oſculum.

This is one of the moſt ſingular and moſt elegant of the Fungus kind, and is one of thoſe plants diſtinguiſhed by authors into a peculiar genus, under the name of Geaſter. When it firſt appears, it has the form of a ſmall roundiſh body, but with five or ſix, or more, evident marks, in form of lines, running from the center toward the circumference; ſoon after, theſe lines open into ſo many cracks, and the volva, which had before entirely covered the body of the Fungus, now burſts into ſix or eight parts, which recede from one another, and leave the body of the Fungus bare: theſe diviſions reach half way down the ſubſtance of the volva, and, as they ſtand round the body of the Fungus, much repreſent the volve of the former ſpecies, before it's points bend downwards; the difference between theſe is only, that, in that plant, the entire part of the volva remains fixed to the body of the Fungus, and the tops of the ſegments, therefore, unable to ſupport themſelves erect, bend downwards; whereas, in this, ſoon after the ſegments ſeparate, the whole or entire part of the volve alſo becomes looſe, and expands itſelf flat upon the ground, with the ſegments in form of rays, extending themſelves flat alſo from it; the volva, thus extended on the ground, is of a whitiſh colour, and fungous ſubſtance, and of about two inches and a half in diameter. It is compoſed of two membranes, with a ſoft and ſomewhat glutinous matter between them. The body of the Fungus is roundiſh; it ſtands on an extremely ſhort pedicle, in the center of the volva, and is of the bigneſs of a ſmall walnut; it's aperture, or oſculum, is in the center, and; being elegantly fimbriated, it forms a ſort of corona, or ſummit, of an obtuſely conic figure. This body conſiſts of a ſingle membrane, containing a ſpungy matter, white at firſt, but afterwards of a browniſh-yellow, and of a regularly cellular ſubſtance, in which are contained placentulæ, with their ſeeds in them, and unqueſtionably flowers alſo, like thoſe of the reſt of the Lycoperdons; though the ſole opportunity I have had of examining this ſpecies in it's mature ſtate was at a time when they were paſt, and the very cellular ſubſtance containing the placentulæ was falling to powder. At this time the fimbriæ of the aperture ſeparate, and the oſculum becomes diſtended, ſo that the ſeeds are eaſily diſcharged. This is a native with us, but is very ſcarce. I found it, in a lane near Catthorp in Leiceſterſhire, in October, where, though I watched it from the beginning, it ripened, before I was aware. I never ſaw it elſewhere. Micheli deſcribes it under the name of Geaſter major umbilico fimbriato.

6. *Lycoperdon volva ſtellata, radiis multifidis, oſculo ſtellato.*
The ſtarry Lycoperdon, with multifid rays and a ſtellated oſculum.

This is a very ſingular ſpecies. It makes it's firſt appearance in form of a round ball, lying on the ſurface of the ground: in a little time there appear a number of lines on the ſummit of this ball, and, ſoon after this, the volva, which had hitherto covered it, burſts and

ſplits

ſplits into ſix or eight ſegments, the diviſions of which run down to the very center almoſt. Theſe ſegments, or rays, immediately on their dividing, fall flat to the ground; they are not lanceolated and entire, as in the former ſpecies, but moſt of them are divided into three or four ſegments each, at the end. The whole volva is compoſed of two thin membranes, with very little matter between them: in the center ſtands a round body of the bigneſs of a ſmall walnut, at the top of which, where the rays of the volva once united, there is a ſtellated opening, capable of admitting the head of a large pin. This whole body is filled with a cellular, ſpungy ſubſtance, containing flowers, ſeeds, and their placentulæ, which are all together, with the comminuted matter, of the cellular ſubſtance, thrown out, at the ſtellar aperture at the top. The extended volva of this ſpecies ſeldom meaſures more than an inch and half in diameter. This is alſo a native with us, but it is very rare: I have only once ſeen it in the hands of the late deſervedly eminent Mr Littleton Brown, who had collected it ſomewhere about Cheltenham. Tournefort mentions it under the name of Lycoperdon veſicarium ſtellatum; and Micheli under that of Geaſter medius radiis plerumque multifidis umbilico ſeu ore ſtellato.

7. *Lycoperdon volva ſtellata, radiis fiſſilibus.*
The ſtarry Lycoperdon, with fiſſile rays.

This is one of the moſt ſingular of all theſe plants; the volva is thicker, and of a tougher ſubſtance than in any of the others, and is very evidently compoſed, throughout, of two firm and ſtrong membranes, with a glutinous matter between. It is divided uſually only into four rays, and theſe are conſiderably broad, and the diviſion runs very deep; they are ſimple and undivided at the ends. In the center of the volva ſtands the body of the Fungus; it is roundiſh, and ſupported on a ſhort pedicle, and is filled, like the reſt, with a ſpungy matter, containing flowers and ſeeds, and finally letting them out in form of powder, at an aperture in it's top. As this Fungus ripens, the two membranes of which the volva is compoſed divide all the way, except juſt at the tips of the ſegments, where they are more firmly connected together. It is not long after this diviſion that the upper part, with the body of the Fungus, begins to elevate itſelf from the lower, and, by degrees, raiſes itſelf up, and forms a kind of arched tower, with the body of the Fungus at it's top; the extremities of the ſegments of the volva alſo, where the two membranes remain connected, are bent up conſiderably, ſo that the whole is raiſed to at leaſt as much height as the volva had before in diameter. In this ſtate it makes a moſt ſingular and ſurpriſing figure. It is a native of England, and, ſo far as we at preſent know, peculiar to it. We owe the communication of it to the late Mr Nicholls, an apothecary in Weſtminſter, and an excellent Latin deſcription of it in the Philoſophical Tranſactions, to the great ornament of that profeſſion, Mr William Watſon.

That gentleman is for ſeparating this and the other ſtellate Lycoperdons from the others under the name of Geaſter, as differing extremely in figure; we ſhall give abundant proof, in the ſucceeding part of this work, that we are perfectly of his opinion, that, in the plants whoſe fructification is leſs viſible, we ought to take the external form into the liſt of generical characteriſtics: but the reſult of a very careful examination of the Lycoperdon family, ſuch as it could not be worth any body's while to make who was not to write upon them, convinces us that there is no eſſential diſtinction between the Lycoperdons and Geaſters.

The other ſpecies of the Lycoperdon kind will be diſtinguiſhed by their names. The moſt ſingular of them are, 1. The common, oval Lycoperdon. 2. The great, round Lycoperdon. 3. The thick-barked, compreſſed Lycoperdon. 4. The Lycoperdon, with a long, ſcabrous pedicle. 5. The ſmall, roundiſh Lycoperdon, with a very long ſcabrous pedicle. 6. The white, umbilicated Lycoperdon. 7. The grey, hairy Lycoperdon. 8. The white, woolly Lycoperdon. 9. The cordated, or heart-like Lycoperdon. 10. The white, papillary Lycoperdon. 11. The white Lycoperdon, with quadrangular ſpines. 12. The rigid, pricked Lycoperdon. 13. The black-barked Lycoperdon. 14. The cheſnut Lycoperdon. 15. The ſmooth, yellowiſh, round Lycoperdon. 16. The ferrugineous, tuberous Lycoperdon. 17. The yellow, tuberous Lycoperdon. 18. The bluiſh, round Lycoperdon, with fibrous, tufted roots, and a very thick pedicle. 19. The onion Lycoperdon. 20. The yellow, thin-ſkinned Lycoperdon, with a purple pulp.

Of

Of the ſtellate kind, or thoſe uſually called Geaſters, beſide the three ſpecies already deſcribed, there are, 1. The pale-red, ſtellate Lycoperdon, with a fimbriated oſculum. 2. The ſmall, rough, ſtellate Lycoperdon, with a ſhort pedicle; and, 3. The large ſtellated Lycoperdon, with a ſtellated oſculum.

FUNGI.

Claſs the Second. Genus the Fourth.

CARPOBOLUS.

CARPOBOLUS is a genus of Fungi, conſiſting of a hollow body, in form of a cup, ſurrounded by a volva of the ſame form; and containing in it's center a ſingle fruit, of a round figure, to the inſide of which adhere the male flowers, and in the cavity of which are lodged the female; which fruit, when mature, is diſcharged entire, by a violent inverſion of the body of the Fungus, and afterwards burſts, and diſcharges it's ſeeds. The male flowers are ſingle antheræ, adhering to the inner ſurface of the upper part of the fruit in vaſt numbers, each having a ſhort filament to ſupport it. Of the female flowers we can diſtinguiſh no part but the ſeeds, which are very minute, and round. Micheli, who firſt diſcovered this ſingular genus, very juſtly diſtinguiſhed it from all the other genera of Fungi: Linnæus, and ſome others, refer this, with the geaſter, to the lycoperdons. We agree with them in referring the geaſter to that genus, becauſe the eſſential characters are the ſame in all the ſpecies of both, and the ſole difference is, in the manner of the volva ſeparating from the plant; but, in this caſe, we are very ſenſible that every one, who has an opportunity of examining theſe little plants, will find them ſufficiently generically different from the lycoperdon; they have not the ſame internal ſtructure, nor the ſame fructification, nor, indeed, do they at all agree to the characters Linnæus himſelf gives of the genus; it evidently approaches more to the Cyathia, next to be deſcribed, than to the Lycoperdon, but it is, in reality, a genus quite diſtinct from both.

1. *Carpobolus albidus ſegmentis latis planis.*
The white Carpobolus, with broad, plain ſegments.

This is an extremely minute plant, and, like the others of this genus, requires a very careful inſpection and examination to find out it's characters. It's firſt appearance is in form of a little whitiſh maſs, of the bigneſs of a pin's-head, and of a ſomewhat duſty ſurface. After it has been in this ſtate ſome time, it opens at the top, and divides into ſix or eight ſegments; this diviſion ſhews, that what was at firſt ſeen was only the external membrane, or volva, of an included Fungus of the ſame ſhape which now appears within, divided into the ſame number of ſegments, at the edge, with the volva, and perfectly reſembling it in figure. The ſegments of both are but ſhort, and, the diviſion being carried only a little depth, the body of the volva, with that of the included Fungus, becomes of the figure of the half of a hollow ſphere, or of a bellied cup, with dentated edges: the ſegments are broad, and pointed at the end, and they do not ſtand erect, but droop, or curl, downwards a little. The inner part of the Fungus is connected to the volva by many tender fibres, and there is a ſoft, gelatinous matter between them, filling up the intermediate ſpace: in the baſe of the cup there is, alſo, contained a quantity of the ſame gelatinous matter, and in that is immerſed a ſmall, round fruit, of a whitiſh colour, as is all the reſt of the Fungus: as the cavity of the plant is now expoſed, this liquor by degrees dries away, and, the fruit ripening during the ſame time, the fibres which connect it to the baſe of the plant, and thoſe which faſten the plant itſelf to it's volva, wither; and, the connection between the plant and it's volva being thus entirely diſſolved, when the fruit is perfectly ripened, the hollow baſe of the plant riſes into a convexity, and the whole cup does the ſame, the volva ſtill retaining it's place and figure. The inverſion of this cup is inſtantaneous, and, the connection between the fruit and it's baſe having been already broken, the conſequence of it is, that the fruit is thrown up to a conſiderable diſtance entire, in which ſtate it remains till, it's outer membrane being diſſolved, the ſeeds are at liberty to grow. The inner cup of the plant, thus inverted on the volva, gives the appearance of two

ſegments of ſpheres, applied in the cut parts one to another; but this it retains only a very little time, it ſoon becomes flaccid, and ſinks into the volva again, and they both decay together. The fruit cut open, and examined with a good microſcope, is found to be compoſed of a membrane, forming one cell, which is, in great part, hollow. To the upper part of it's inner ſurface are affixed the antheræ, which appear like globules of duſt, but are of an oblong form, and the reſt of it's cavity is filled with roundiſh, white ſeeds.

This ſpecies is common, in many of our woods, on the ſtumps of old trees, and on the dead ſticks that lie about among the leaves. I have frequently met with great cluſters of it in Cane-wood, in October and November. It appears like little white bliſters on the ſurface of the wood.

2. *Carpobolus ſegmentis longioribus.*
The Carpobolus with longer ſegments.

The firſt appearance of this plant is much like that of the former, a mere tubercle, of a whitiſh colour, and ſomewhat duſty ſurface: as ſoon as it opens, however, it ſhews itſelf to be a very different ſpecies. The ſegments of the volva are longer and narrower, and the inner cup or body of the Fungus is divided in the ſame manner, and is of a beautiful yellow colour, which, with the white of the volva every-where ſurrounding it, has a very pretty effect. The fruit, which lies at the bottom of the cup, is ſmall and round. The whole plant is not more than a twelfth of an inch in diameter at the rim, and of about the ſame depth, being nearly the half of a hollow ſphere. When the fruit is ripe, the cup, or hollow body of the Fungus, turns inſide out, and, becoming inſtantaneouſly convex, darts the fruit from it to a conſiderable diſtance. The fruit is brown, and of the ſize of a ſmall pin's-head, round, and full of minute, round, whitiſh ſeeds. This ſpecies is leſs frequent with us than the former: I do not remember to have obſerved it any where, except in Charlton-foreſt in Suſſex, where it is not uncommon about the dead ſtumps of trees. Micheli deſcribes it under the name of Carpobolus aureus volva albida, fructu obſcuro, ſeminibus albidis ſubrotundis.

3. *Carpobolus ſegmentis undulatis.*
The Carpobolus with undulated ſegments.

This is the moſt elegant and beautiful of all this genus. It appears at firſt in form of a little red puſtule, no bigger than a pin's-head: a thouſand of theſe are often ſeen together on a ſtick or rotten board. From this it expands at the top, and the volva and cup itſelf are both divided at their edges into ſegments, ſix or eight in number, very ſhort, and undulated at the edges; in the center of the cup lies the fruit, which is round, and of a duſky purple, all the reſt of the Fungus being of a bright vermilion colour. When the fruit is ripe, it is diſcharged with violence, in the ſame manner as from the other ſpecies. This is frequent, in the woods in Leiceſterſhire, on rotten ſticks of all kinds, but it's ſmallneſs has made it, like the others, little obſerved or regarded.

Theſe are all the known ſpecies of this elegant little plant; from the deſcriptions and characters of which it abundantly appears, that they are not of the lycoperdon kind. If the inner and outer cup were compoſed of two contiguous membranes, and made but one common volva, which, ſeparating afterwards, raiſed the body of the Fungus with the upper membrane, it would reſemble, in that reſpect, the ſtellate lycoperdon; but this, though it appears to have been underſtood to be the caſe, is not ſo: the two cups are, from the beginning, two ſeparate bodies, not as in the volva of thoſe Fungi, the two membranes of one ſubſtance.

FUNGI.

Class the Third Genus the Sixth.

CYATHIA.

CYATHIA is a genus of Fungus consisting of a hollow conic, cylindric, or hemispheric body, covered with a thin membrane at the top, and containing in it's cavity several roundish fruits, of the nature of the single one of the carpobolus, each affixed to the inner surface of the cup by a fine short filament.

These plants produce distinct male and female flowers, both within the cavity of the fruits. The male flowers consist of single antheræ, adhering to the upper part of the inner surface of the fruit; the rest of it's cavity is filled with seeds, inveloped, while unmature, in a mucilaginous matter.

Linnæus makes the peziza of Dillenius of the same genus with this, but erroneously: the peziæ have, indeed, the external cup-like shape of the Cyathia, but they have nothing of it's manner of fructification.

1. *Cyathia elatior campanulata.*
The taller, bell-shaped Cyathia.

This is the most frequent with us of any of the species of this genus. It adheres to the substances it grows on, by means of a fibrous root, variously divaricated; from this there first arises a roundish oval or irregularly figured tubercle, of about a fourteenth of an inch in diameter, on which the plant seems to be fixed, as on a base, or pedicle: from this it rises in the form of a bell, but somewhat too long for it's breadth to be exact in that form; it's bottom is narrow, and from this it gradually expands and increases in width to the top, where it is a third of an inch, or more, in breadth, and it's verge is usually, when ripe, turned down a little, and undulated. While young, it is covered at the top with a fine thin membrane, which seems strained over it as a bladder over the mouth of a glass. This membrane soon after cracks in the middle, the cracks running four ways, in the opposite directions, and, soon after, the segments curl up and wither, so as entirely to disappear. When this membrane bursts, the mouth of the Fungus expands, and it's cavity is found to be filled almost to the top with fruits; they are of a roundish figure, and are so large, that twelve or fourteen of them fill up the whole cavity of the bell: they are each affixed to the sides or base of the Fungus by it's own particular pedicle, which, when they are mature, wither and let them loose. The whole plant is of a dusky blackish colour. The fruit cut open, while young, seems a mere mass of fungous matter; but, if opened, when near maturity, antheræ, like those of the other Fungi, will be found adhering singly, each on it's own filament, to the internal part of the surface at the top, and the rest of the cavity is filled with a glutinous matter, in which there are lodged a great quantity of oval seeds. The double microscope is the most useful in these examinations, and, as the glutinous matter is too thick to be conveniently viewed by this in it's natural state, it may be diluted with a little water, and the seeds will then be distinctly visible. To see the antheræ, a segment of the upper part of the fruit is to be placed before the largest single magnifier that can be procured: Mr Cuff has furnished me with my glasses, which are excellent.

Most of the botanical writers have described this Fungus, though few of them have had any just idea of it's fructification. Micheli discovered the seeds; the antheræ have not, that I know of, been described before. Ray calls it Fungus calcyiformis seminifer; Clusius, Fungus minimus anonymus; and Tournefort, Fungoides infundibuliforme semine fœtum. It is frequent about the stumps of old gate-posts, and on the stalks of plants trod down and rotting, particularly on the stalks of corn. It is to be found from autumn till April.

2. *Cyathia campanulata hirſuta elatior.*
The taller, hairy, campanulated Cyathia.

This is a very ſingular ſpecies. It's root is compoſed of two or three fibres, which are each divaricated into ſeveral parts; from the joining of theſe at the top, there ariſes a tubercle of an irregularly oval figure, on the top of which is fixed the cup or bell: this is narroweſt at the bottom, and gradually grows wider to the top. It is of a duſky blackiſh colour, and hairy on the outſide; and it's top is covered with a membrane: this ſplits and diſappears, after a little time, and diſcovers the internal cavity of the Fungus, which is ſmooth, longitudinally ſtriated, and of a duſky bluiſh, or lead-colour: a great part of this cavity toward the top is empty, but at the baſe there are lodged a number of roundiſh fruits, ſmaller than thoſe of the former ſpecies, and each affixed by it's pedicle. The ſtructure of theſe within is the ſame with that of the former, but, as they are lodged deep, the cup, after they are thoroughly mature, cracks and ſplits all the way down in three or four places to let them out. This ſpecies is frequent about old wood in Leiceſterſhire, and has been often met with alſo in the neighbourhood of London.

Dillenius calls it, Peziza calyciformis lentifera hirſuta; and Ray, Fungus ſeminifer externe hirſutus, interne ſtriatus. Boccone has it alſo under the name of Fungus ſpermatias calyculatus.

There are, beſide theſe, three other ſpecies of this genus, which will eaſily be diſtinguiſhed by their names: they are, 1. The ſhort Cyathia, with a broad baſe. 2. The hemiſpheric Cyathia, with undulated edges, and large black fruit; and 3. The hemiſpheric Cyathia, with a ſmall baſe. Theſe all agree in their fructifications with the other ſpecies. Mr. Doody obſerves, in Ray's Synopſis of the Engliſh plants, that Goedart affirms, that the ſeeds, as they are called, of theſe Fungi, when they fall to the ground, hatch in a few days into ſpiders: but he prudently adds, that he ſhould defer giving his own opinion, as to the truth of it, till he had tried it himſelf. The truth is, that, beſide the fruits found in the cavities of theſe plants, there is a peculiar ſpecies of ſpider that frequently lays it's eggs there.

FUNGI.

Claſs the Third Genus the Seventh.

ENCÆLIA.

ENCÆLIA is a genus of Fungus, hollow, and containing in it's cavity ſeparate and naked ſeeds. The ſeeds are extreamly minute, and the mouth or aperture of the Fungus not covered by any membrane, ſo that, when mature, they are by the leaſt motion diſplaced, and thrown upwards in form of powder. Theſe plants produce diſtinct male and female flowers. The male flowers are antheræ, ſtanding ſingly on very ſhort filaments, and appearing in form of a fine duſt on the ſurface of the hollow of the Fungus. The female flowers we ſee nothing of, except the ſeeds, which lie naked and ſcattered over the ſurface of the ſame hollow of the plant, but in ſeparate parts of it. Theſe ſeeds are of an oval figure, and the antheræ are oblong, and much ſmaller; both may often be diſtinguiſhed together by a good microſcope in the hollow.

Though all the Encæliæ are hollow, they are very variouſly ſo; ſome are very deeply hollowed, ſo as to reſemble a cone ſet on it's baſe; ſome are ſo lightly hollowed, as to reſemble only a ſaucer: ſome have pedicles, and others are ſeſſile; and, of thoſe which have pedicles, ſome have them very ſhort, others very long and ſlender: ſome of them are finally wide open at the mouth, and others corrugated, and wider in ſome other part. From this various form of the hollow of the Encæliæ, ſome of them reſemble ſegments of ſpheres, ſome of ovals, and ſome of cones; whilſt others ſeem only flat bodies, with their edges turned a little up. Dillenius has confounded this genus with the laſt, under the common name Peziza, and Linnæus has followed him in this; but the fructifications are ſo extreamly different, that nothing can be more evident, than their belonging to two diſtinct genera.

1. *Encælia*

1. *Encælia ſeſſilis, extus piloſa, hæmiſphærica.*
The hemiſpheric ſeſſile Encælia, hairy on the outſide.

This is a very beautiful Fungus; it adheres by it's baſe to the ſubſtances it grows on, without the leaſt appearance of a pedicle. It is of the ſize of the half of a large nutmeg, but more rounded, and indeed uſually appears to be the half of a tolerably regular ſphere. It is compoſed of a thin, but tough and fine membrane, and is perfectly even at the ſurface. It's outſide is reddiſh and hairy, it's inſide or cavity ſmooth and of a fine ſcarlet colour; when it becomes fully mature, however, it appears ſomewhat leſs ſmooth on the ſurface than it was before, and, on the leaſt motion given it, a fine duſt is ſeen to ariſe in a column from it, which is the ripe ſeed diſlodged and diſcharged by the ſhaking. Examined by the microſcope, the whole ſurface at this time appears covered with particles, ſome oblong, ſome oval; the oblong ones are the antheræ, they ſtand about the verge or on the upper part of the cup; the oval ones are the ſeeds, and lie moſtly nearer the bottom; the antheræ are connected by a ſhort filament to the body of the Fungus; the ſeeds ſeem looſe, but, if examined by a very powerful magnifier, each is found to have it's peculiar little cell, in which it lies till thus forcibly diſcharged; a motion of the Fungus is always neceſſary to the diſcharging of theſe ſeeds; but when they are thoroughly mature, and fit for the immediate propagation of the plant, the motion given it by the lighteſt breath of wind is ſufficient for the purpoſe. This beautiful ſpecies is very common in our woods, and under hedges in many parts of England. On Iver-heath in Buckinghamſhire, and in Charlton-foreſt, Suſſex, I have met with a great deal of it. It grows on old ſticks, and ſometimes on the ground. Micheli calls it, Fungoides ſcutellatum coccineum, intus glabrum, foris ubivis piloſum.

2. *Encælia lata ſeſſilis marginibus cirratis.*
The broad Encælia, with cirrated edges.

This is an extreamly beautiful Fungus. It adheres to the ſubſtances it grows on immediately by the baſe, without the leaſt appearance of a pedicle: from this baſe it expands itſelf every way, in a roundiſh but ſomewhat irregular form, and lightly hollowed. When fully grown, it is about half an inch in diameter at the top, and about a third of an inch in depth. It conſiſts merely of a fine, tough membrane, of the thickneſs of a moderate parchment. It is all over of a bright and ſtrong ſcarlet colour, and always ſomewhat ſtronger coloured in the hollow, than on the outer ſurface: on this outer part there are placed a few, ſhort, fine hairs or cirri, but round the brim there ſtand a beautiful row of ſtiff and black ones, very ſhort, moderately thick, and of a gloſſy ſurface, theſe add greatly to the beauty of the plant, and remain erect on it's edge, as long as it retains it's form. It's inſide appears of a ſmooth ſurface at all times, except when the fructifications are there; in this caſe it is covered with a kind of fine powder, which ſomewhat debaſes it's high ſcarlet colour. Examined with a microſcope, this powder is found to be compoſed of the antheræ and ſeeds; the antheræ oblong, and placed near the brim; the ſeeds oval, and lying in the hollow toward the bottom; at this time a little ſhake throws them all out in form of a fine duſt. This beautiful ſpecies is found in many parts of England; it uſually grows on old ſticks, and decayed trees in woods. I have found it abundantly in ſome woods near Denham in Buckinghamſhire. Ray calls it, Fungus arboreus acetabuli modo, cavus, coccineus, marginibus piloſis; and Dillenius, Peziza acetabuliformis coccinea, marginibus piloſis.

3. *Encælia ſinuoſa ſeſſilis.* Jew's Ears.
The ſinuous Encælia, without a pedicle.

This is a much leſs regular plant, in it's manner of growth, than either of the preceding ones. It ariſes from a broad baſe, by which it adheres to the ſubſtance it grows on, without any pedicle; from this it expands itſelf every way, ſo as at length to form a variouſly ſinuous and undulated ſubſtance, ſomewhat hollowed, and of an oblong, or irregularly roundiſh figure. It is compoſed of a ſingle tough membrane, and is often an inch and half, or more, in diameter. It's edges are not even, but higher

er in ſome places, and lower in others. It's colour is a duſky bluiſh, approaching to black, and it has often ridges in ſeveral parts of it, forming other ſmaller and irregular figures, roundiſh, or oblong, and ſinuous; theſe give it much the appearance of the human ear, whence it obtained it's Engliſh name, Jew's Ears. It's ſurface is at all times, except when about it's fructifications, perfectly ſmooth; at this period it appears covered with an extreamly fine duſt ſcarce perceivable without a microſcope, and this duſt, when examined with a very powerful magnifier, proves to be regular, oval ſeeds in vaſt numbers, and about the edges are often perceived the antheræ, ſingle, oblong, very ſlender, and adhering to ſhort pedicles or filaments.

This ſpecies is often met with in the ſtumps of old trees, and on other rotten wood. But there is another kind of irregular Encælia hereafter to be mentioned, under the name of the membranaceous expanded ſpecies, which is common on the old water-pipes about Iſlington, and in the like places, and is pretty conſtantly received in the ſhops in it's place. It is deſcribed by C. Bauhine, under the name of Fungus membranaceus auriculam referens ſive ſambucinus; and other authors call it, Auricula Judæ, and Fungus ſambucinus, from it's often growing on the elder. There is, however, a yellow Encælia, more frequent on the elder, which many will have to be the true auricula Judæ: it is much recommended againſt quinſies and ſore throats. Phyſicians do not often preſcribe it; but the common people very frequently uſe a decoction of it in milk for theſe purpoſes, and it is ſaid with ſucceſs. An infuſion of it in water is alſo recommended by many authors, as a collyrium againſt inflammations of the eyes.

4. *Encælia conica pediculo brevi.*
The conic Encælia, with a ſhort pedicle.

This is a very ſmall, but a very pretty Fungus; it grows to about a third of an inch in height, and is throughout of a whitiſh colour and ſmooth. It's root conſiſts of two or three ſlender fibres; from theſe ariſes a very ſmall pedicle of about an eighth of an inch high, and at the top of this ſtands a cup of an inverted conic figure, formed of a thin membrane, and with it's pedicle perfectly reſembling a common wine-glaſs, with a ſhort foot. It's cavity is, when in the ſtate of fructification duſty, and, on diſturbing it, ſends up a fine powder: this powder conſiſts partly of antheræ, which were placed at the edge of the cavity, and partly of oval ſeeds which were lodged in all the other parts of it. This ſpecies is common on rotten ſticks in our woods, ſometimes on dead leaves. Micheli calls it, Fungoides minimum infundibuliforme, album, hederæ foliis innaſcens.

5. *Encælia pediculo longiſſimo, ore lato.*
The long-ſtalked Encælia, with a broad opening.

This is a very ſingular Fungus; it's root is tuberous and perennial, of a black colour on the outſide, and whitiſh within. From this there uſually grow ſix or eight plants together; the pedicle of each is of the thickneſs of a wheat-ſtraw, and about two inches in length; toward the top it begins to expand, and, in fine, forms a cup very wide at the mouth, not very deep, and of a conic figure with the baſe upward. The colour of the whole plant is a duſky browniſh yellow; it's cup is ſmooth on the inſide, except when in the ſtate of fructification; then it is ſomewhat duſty, and on a ſhake will diſcharge it's duſt or powder, like the reſt of this genus. The antheræ, which compoſe that part of this powder which is neareſt the top of the cup, are oblong; the remainder of it is formed of oval ſeeds, placed in little ſhallow cavities: theſe ſeeds are larger than thoſe of ſeveral other ſpecies, but it requires a very good microſcope to diſcover the plaineſt of them with any degree of accuracy. This ſpecies is leſs common than any of the others. I have once or twice met with it in Charlton wood, between Greenwich and Woolwich. Micheli calls it, Fungoides ceſpitoſum infundibuliforme, fulvum, radice nigra, tuberoſa, perenni.

The other ſpecies of Encælia will eaſily be diſtinguiſhed by their names: thoſe without pedicles are, 1. The yellow, deep Encælia. 2. The white, deep Encælia. 3. The angular, ſhallow Encælia, the pezita of Pliny. 4. The curled, undulated Encælia. 5. The yellow, aculeated Encælia. 6. The white, aculeated Encælia. 7. The white Encælia, hairy on the outſide. 8. The broad, ſcarlet Encælia. 9. The deep,

deep, ſcarlet Encælia. 10. The thick, rough Encælia. 11. The furrowed, hemiſpheric Encælia. 12. The black, rough Encælia. 13. The lenticular Encælia, with hairy edges. 14. The purple, ſhining Encælia. 15. The little, yellow Encælia. 16. The little, ſcarlet Encælia. 17. The little, brown Encælia. 18. The pear-faſhioned Encælia, with ſerrated edges. 19. The ſcarlet, pear-faſhioned Encælia, with a marginated edge. 20. The acorn-cup Encælia. 21. The great, expanded, membranaceous Encælia. Of the Encælia which have pedicles are, 1. The Fungiform, curled Encælia. 2. The Encælia, with a very thick pedicle. 3. The undulated Encælia, with a long pedicle. 4. The funnel-ſhaped Encælia. 5. The ramified, tall Encælia. 6. The tall Encælia, white without, and red within. 7. The grey, ſhort Encælia. 8. The little, ſcarlet, bending Encælia. 9. The little, white, cup Encælia. 10. The great, open Encælia. 11. The black Encælia, with a brown ſpotted mouth.

FUNGI.

Claſs the Third. Genus the Eighth.

CLAVARIA.

CLAVARIA is a genus of Fungi, conſiſting of a ſingle, oblong, erect body, or ſtalk, of an uniform ſurface, and of a ſoft, fleſhy, and ſucculent ſtructure.

Vaillant firſt eſtabliſhed this genus of Fungi, but he gave no characters of it. Dillenius has confounded it with a number of others, under the name of Fungoides; and Linnæus has taken in, under it, the Coralloides of Tournefort, and others, which are of a diſtinct genus, as is evident from their ſtructure and fructification. The Clavariæ produce diſtinct male and female flowers. The male flowers are antheræ, adhering four or more in a cluſter to the ſame filament: the female flowers have nothing diſtinguiſhable, except the ſeeds which are round, and are lodged in ſhallow cavities. The male and female flowers are both produced on the ſurface of the plant; the male flowers only on the upper part, the female only on the lower. Of the Clavariæ ſome are very tall and ſlender, others thicker and ſhorter; ſome are nearly of an uniform thickneſs all the way, others are gradually ſmaller from the baſe to the extremity, where they terminate in a point; but the far greater part are ſmalleſt at the bottom, and large toward the top. They ſome of them grow ſingle, others in cluſters; and, finally, ſome of them are hollow, but the far greater part are ſolid.

1. *Clavaria ſimplex durior apice obtuſo.*
The harder, ſimple Clavaria, with an obtuſe top.

This has for it's root a little tuberoſity of a blackiſh colour, from which it riſes in form of a ſmall club; it's lower part is roundiſh, and of the thickneſs of a ſmall ſtraw; in this form it runs up half it's height, but from this part upwards it ſwells into twice that thickneſs, and terminates at the top in an obtuſe point. It's colour is black; it's ſubſtance fleſhy, but ſomewhat hard; it ſeldom grows quite ſtrait; and it's height is from an inch and half to more than two inches: in it's mature ſtate, if it be carefully drawn through the fingers, there will a ſubtle powder be left on them, which, examined by the microſcope, appears to be compoſed of a mixture of oblong and mutilated particles, and of pretty regularly round ones. The plant itſelf, carefully examined, will be found to have the oblong ones growing all round it's upper part, and adhering in little cluſters to the ends of filaments, four or more to each filament; theſe are the antheræ, or male flowers, and theſe alone occupy the top of the plant: lower down as far as to the bottom of the thick part, there lie the other round particles or ſeeds in cluſters, four or more together.

The plant is common in many parts of England; in autumn among high graſs. I have found it abundantly about Denham in Buckinghamſhire, and elſewhere. Ray calls it, Fungus ophiogloſſoides niger; and Vaillant, Clavaria ophiogloſſoides nigra.

2. *Clavaria*

2. *Clavaria ceſpitoſa mollior apice obtuſo.*
Softer, blunt-pointed, ceſpitoſe Clavaria.

This has for it's root an irregular tuberoſity, of the bigneſs of a horſebean, or larger, and uſually flattiſh, and with ragged edges; from this there generally ariſe ſix or eight plants pretty cloſe to one another. They grow to about an inch and half high, and are of a ſoft, fleſhy ſtructure, and yellow colour. Every plant is, at the lower part, of the thickneſs of a large packthread; but from a third of the height, or thereabouts, it begins to expand, and continues larger till near the top, where it again diminiſhes a little, but ends in an obtuſe point. The plant is ſolid, and of a fungous texture; on it's top, in the ſeeding-time, ſtand antheræ in cluſters, and all the way down it's thicker part are lodged the ſeeds in little cluſters alſo. The antheræ are oblong, and of very ſhort duration. The ſeeds are round, and remain longer: in general however, the perſon, who would examine the fructifications of the bodies of this claſs, ſhould either carry his microſcope about him to do it on the ſpot, or take them home with the earth about them, while yet in an unripe ſtate, that they may grow up and fructify under his eye. The Engliſh botaniſts know a ſingle, yellow Clavaria; but this tufted one has not been mentioned by any author, except by Micheli, under the name of Clavaria ceſpitoſa, media, lutea. It is found in September and October on Putney heath, and in ſome other places about London, but it is not very frequent.

3. *Clavaria fiſtuloſa apice acuto.*
The hollow Clavaria, with a ſharp point.

This is extreamly different from the other Clavariæ in it's form. It's root is a flattiſh tubercle, of the breadth of a ſhilling, and of about a ſixth of an inch in thickneſs; from this there uſually ariſe five or ſix plants ſtanding very cloſe to one another. Each plant is about two inches high, and at the baſe, where it is thickeſt, is about an eighth of an inch in diameter. From this part it grows up gradually ſmaller all the way, and at the top terminates in a point. It's colour is white, it's ſubſtance ſoft and fungous; it is naturally round, but is eaſily preſſed flat in any part, and when cut, or broken, is found to be hollow. The antheræ are oblong, and ſtand in cluſters about the tops of the plant: the ſeeds are round, and are placed alſo in little cluſters, all the way down the ſurface to the very baſe. It is not common with us, but I have obſerved it in the paſtures about High Wickham in Buckinghamſhire, and about Catthorp in Leiceſterſhire, pretty plentifully. It grows among the high graſs, and is uſually met with in September, October, and November.

The other ſpecies of Clavaria, after the deſcriptions of theſe three, will eaſily be known by their names: they are, 1. The great, yellow, club-headed Clavaria. 2. The great, white, club-headed Clavaria. 3. The great, reddiſh, curled Clavaria. 4. The broad-headed, yellow Clavaria. 5. The green, ophiogloſſoide Clavaria. 6. The yellow, ophiogloſſoide Clavaria. 7. The little, yellow, Clavaria. 8. The ophiogloſſoide Clavaria, with a hairy pedicle. 9. The ſnow-white ophiogloſſoide Clavaria. 10. The white, ceſpitoſe, ſolid Clavaria.

FUNGI.

Claſs the Third. Genus the Ninth.

MERISMA.

MERISMA is a genus of Fungi, conſiſting of ſtalks variouſly divaricated and ramoſe, erect, and terminating at the extremities either in very ſmall and flat expanſions, or in ſlender twigs, of an uniform ſurface, and ſoft fleſhy texture.

Theſe Fungi produce diſtinct male and female flowers, on the ſame parts of their ſurface. The male flowers conſiſt only of oblong antheræ, which ſtand ſingle, each on it's ſeparate filament, which is very ſhort. The female flowers offer no part to view but their ſeeds; theſe are of an oval figure, and are placed among the antheræ ſingly,

ſingly, and in leſs number than in almoſt any other kind of Fungus. Both the male and female flowers ſtand on the tops of the branches in the Meriſmæ; whereas, in the clavariæ, the male flowers occupy the upper parts of the plant, and the female the lower. In all the Meriſmæ, I have yet had opportunity of obſerving, the antheræ ſtand ſingle, and the ſeeds alſo are placed in the ſame manner: in all the clavariæ the antheræ are placed four or more on every filament, and the ſeeds are diſpoſed in the ſame ſort of cluſters on the plant. Tournefort and others call this genus Coralloides, from the reſemblance of ſome of the ſpecies to the corals. Vaillant calls it, Corallo-fungus. Dillenius, Fungoides; among many other genera, which he has improperly placed together under that name. Linnæus comprehends both this and the former genus under the name of Clavaria. We have thought it neceſſary to ſeparate diſtinct genera; and as the term Coralloides has been applied by Dillenius to a genus of the moſſes, and the other names ſeem little expreſſive of the characters of the plant, we have called it, from it's frequent diviſions and ramifications, Meriſma, from the Greek, μεριζω to divide.

1. *Meriſma ramulis teretibus bifidis.*
The round and bifid-branched Meriſma.

This is an extremely elegant Fungus. It's root is a tuberous body, of the ſize of a nutmeg, of a whitiſh colour, and very uneven ſurface. From this there uſually grow three or four ſeparate and diſtinct plants: each riſes with a ſingle, roundiſh ſtem, of the thickneſs of a large packthread; and this grows larger, as it becomes higher, and, at the height of about half an inch, or leſs, divides uſually into two, ſometimes into three, parts; each of theſe afterwards divides into others, and thoſe ramify again in the ſame manner; the extremities are uſually pretty regularly bifid, and the reſt of the plant is, in general, divided in the ſame manner. The branches are all round; and the whole plant is about two inches, or more, in height, and is of a fleſhy, ſoft ſubſtance, and of a pale-red colour. At the extremities of the branches ſtand the antheræ, on their filaments, and, among theſe, the ſeeds are diſpoſed; they are oval, and lie in hollow ſockets of the ſame form. The ſtamina ariſe from the interſtices between theſe. This elegant ſpecies of Fungus grow annually, in conſiderable plenty, in the Arbor Vitæ Grove at Goodwood, where once the greateſt of all patrons of botany in England has often admired it's ſtructure and fructifications.

2. *Meriſma ramulis compreſſis varie diſſectis.*
The flat-branched, variouſly-divided Meriſma.

The root of this ſpecies is ſmall and tuberous; from this it uſually ariſes ſingle, with a roundiſh ſtem, of the thickneſs of a man's little finger; this, however, ſcarce grows to any height ſingle; it divides, almoſt immediately from the baſe, into three, four, or five branches. Theſe go up but a little way, before they divide, each into ſeveral others, and thoſe ramify again; the ramifications, at length, terminate in ſomewhat broad and variouſly-diſſected extremities: all the branches are of a compreſſed, or flatted figure. The plant grows to three or four inches in height, and it's colour is a pale yellow. All about the tops of the ramifications ſtand, at the proper period of it's growth, antheræ, of an oblong figure, ſupported each by it's ſingle ſtamen, ariſing from the interſticial ſpaces between certain little cells, in which are placed oval and very minute ſeeds, one in each cell. We have this Fungus in the paſtures of Northamptonſhire, and in many other parts of England; it is very common in September. It is a very beautiful one, but it is but of ſhort duration. Tournefort calls it Coralloides flavum; and J. Bauhine, Fungus ramoſus flavus.

3. *Meriſma barbata ramulis teretibus.*
The bearded Meriſma, with round branches.

This is a very ſingular and very elegant ſpecies. It's root is a ſmall, tuberous body, from which it ariſes with a very thick and round ſtem; this increaſes in bigneſs till about an inch high, where it is often not much leſs than an inch in diameter. From this part it divides into a multitude of round branches, which again divide into others, and theſe again into yet ſmaller, ſo that, at the extremity, the branches are not thicker than

hairs, and in an innumerable quantity. The whole plant grows to about four inches in height, and the tufted top is often more than three inches in diameter; the branches all run up round to the very extremities. The whole is of a fleſhy, ſoft texture, and of a whitiſh colour, with more or leſs tinge of red in it: about the extremities there ſtand a great number of antheræ, and the ſeeds are diſpoſed, as in the other ſpecies, among them: they are, however, ſo extremely minute, that a very powerful magnifier is neceſſary to get the ſight of them. I have not met with this ſpecies in any more than one place in England, which was near Mendip-hills. Tournefort has deſcribed it under the name of Coralloides dilute purpuraſcens.

The other ſpecies of Meriſmæ will eaſily be diſtinguiſhed by their names: they are, 1. The white, large, flat-branched Meriſma. 2. The great, ramoſe, white Meriſma; this is of the form and ſize of a colly-flower. 3. The little, duſky-yellow Meriſma. 4. The very ſmall, yellow Meriſma, found on the barks of trees. 5. The glutinous, yellow Meriſma. 6. The ſilvery, white, fine Meriſma. 7. The ſhort, horned, violet-coloured Meriſma. 8. The ſhort, flat, and broad-branched, Virginian Meriſma. 9. The porcupine Meriſma of Boccone. 10. The ſetaceous Meriſma. 11. The buck's-horn Meriſma. 12. The red buck's-horn Meriſma. 13. The little, capillary, violet Meriſma. 14. The blue, gelatinous Meriſma. 15. The criſtated, verrucoſe Meriſma. 16. The white Meriſma, with purple tops. 17. The fiery-red Meriſma, with ſhort ramifications. 18. The broad-branched, fleſh-coloured Meriſma. 19. The yellow Meriſma, with ſhort, expanded ramifications. And, 20. The grey, corniculated Meriſma.

FUNGI.

Claſs the Third. Genus the Tenth.

XYLARIA.

XYLARIA is a genus of Fungus, conſiſting of branches, or ſtalks, of a woody ſtructure, tough, firm, and hard, and of an uneven ſurface.

Theſe Fungi produce ſeparate male and female flowers. The male flowers conſiſt only of antheræ of an oblong figure, ſupported on very ſhort ſtamina, and are placed on the upper parts only of the plant. The female flowers are lodged in cavities, or cells, in the lower parts of the plant, and conſiſt of placentæ, of a roundiſh figure and gelatinous ſubſtance, to which are affixed great numbers of roundiſh ſeeds.

Dillenius confounds the plants of this genus with thoſe of the former, and of ſeveral others, under the name of Fungoides. Micheli calls the genus Lichen agaricus. We have given it the name Xylaria, from the Greek ξυλον, wood, theſe being the only Fungi that are truly of a woody texture. The fructification of one of the ſpecies of this genus is deſcribed very accurately in the Memoirs of the Paris Academy, and Micheli has deſcribed all the parts of it, as we have ſeen them; but he miſtakes the farina for the ſeed, and *vice verſa*, and has figured numbers of the ſeeds, adhering to one another, in form of a necklace, by means of the glutinous matter of the placenta, under the name of a peculiar configuration of the farina.

The cells, in which the placenta with it's ſeeds are placed, are, in ſome ſpecies, round, in others cylindric; in ſome they are buried wholly in the ſubſtance of the plant, and have only an aperture correſponding with it; in others they protuberate from within, a little way out beyond the ſurface, and, in ſome others, they are tubercles affixed to the plant, and not penetrating at all into it's ſurface: ſome of the ſpecies are ſimple, ſome divaricated, and ſome branched.

1. *Xylaria compreſſa extremitatibus divaricatis.*
The flatted Xylaria, with divaricated extremities.

This is one of thoſe Fungi which, in their different ſtates, put on very different forms; and it has, like ſome others, been, for that reaſon, deſcribed under different names, as ſeveral different ſpecies. It grows to two inches, or more, in height, and is, in the broadeſt part, ſometimes a third of an inch, or more, in diameter. It riſes with a ſingle ſtem, of a compreſſed ſhape and rough ſurface; this ſometimes runs up ſingle, tapering all the way, till it terminate in a point; ſometimes alſo it is roundiſh,

or

or very little flatted; more uſually, however, it divides towards the top into two or more branches, which, as they extend themſelves in length, increaſe alſo in breadth, and, after they have thus expanded themſelves into a ſort of palmated form, terminate in two, three, or more diviſions, reſembling fingers. This is the moſt uſual ſtate of the plant, but it occaſionally aſſumes many other forms, and frequently, in a cluſter of twenty or thirty plants, ſome will be ſo very unlike the others, that, if they did not grow together, it would not be eaſy to know them for the ſame plant from their ſhape. Whatever be the form of the plant, however, it's colour and texture are permanent; it is tough and hard as wood, and is black all the way up to the extremities, which are white and duſty; the reſt of the ſurface is often, in many parts, covered with roundiſh tubercles. The duſty matter on the white tops of this plant, when examined by a microſcope, proves to be no other than a vaſt number of antheræ, of an oblong figure, ſtanding ſingly, and adhering to ſhort filaments; the tubercles on the other parts of the plant are of a roundiſh figure: they have each a ſmall aperture in the center, and an hollow forming the cells in which the placenta with the ſeeds lie. The placentæ are ſmall, roundiſh, and of a glutinous ſtructure, and the ſeeds either ſimply cover the ſurface of them, or adhere to one another, by means of this glutinous matter, in long ſeries, propagated from the ſeveral parts of the placenta.

This ſpecies is very frequent with us on old wood, and the ſtumps of decaying trees. Ray calls it Fungus ramoſus, compreſſus, niger, apicibus albidis; and Tournefort, Coralloides ramoſum, nigrum, compreſſum, apicibus albidis.

2. *Xylaria teres, pediculata, ceſpitoſa, ſimplex.*
The cylindric, ſimple, pediculated, ceſpitoſe Xylaria.

This ſingular plant riſes to about an inch, or little more, in height. It uſually grows in cluſters, twenty or more of the plants near one another; but each is diſtinct, to the baſe, and evidently ſprings from it's own ſeparate root. It conſiſts of a pedicle, round, and of the thickneſs of a ſmall packthread, and about a quarter of an inch in length; on the ſummit of this ſtands an oblong, cylindric body, three quarters of an inch, or more, in length, of the fifth of an inch, or thereabout, in diameter, and obtuſe at the end. It is not all the way of the ſame uniform thickneſs, but appears tumified in certain places at ſmall diſtances, in the manner of a pod, with large ſeeds in it, which mark the places where they are, by ſwelling up that part of the pod. All over the ſurface of this body there ſtand little protuberances, with perforations in them. Theſe open into round cavities, in which are the ſeeds of the plant, affixed to a roundiſh or oval, gelatinous placenta; the antheræ are leſs diſtinct than in the former ſpecies; they form a kind of brown powder about the top of the plant, and, when examined with a large magnifier, are found to be oblong bodies, affixed to the ſurface of the plant by ſhort ſtamina. In the ſpecimen I examined, I found many of theſe on the lower, as well as upper part of the plant; but theſe latter were all looſe, ſo that it is not certain whether they originally grew there, or were fallen from the top.

This ſpecies is not common with us: I found it once on a ſtump of a tree in Charlton-foreſt, and once on an old gate-poſt near Loughborough in Leiceſterſhire. Ray calls it Fungus piperi Æthiopico ſimilis ſive digitatus niger, and ſuppoſes it to be the Hypoxylum ſive excrementum ligni putridi fungoſum of Mentzelius, but erroneouſly.

3. *Xylaria teres ramoſa.*
The cylindric, ramoſe Xylaria.

The root of this ſpecies is extremely long; it creeps under the ſurface of the ground to two feet, or more, in length, and is tough, firm, black in colour, ſomewhat compreſſed, and of the thickneſs of a large packthread: from this, at certain diſtances, there riſe plants, which grow to near two inches in height. The ſtem is uſually ſingle, and thicker than the root it riſes from; it is round and rough on the ſurface. This divides, at the height of half an inch, into ſeveral branches, which again divide into others, and are uſually bifid at the ends: they are round all the way up, as at the baſe, and are black from the baſe to near the extremities, where they are of a pale reddiſh colour. Theſe tops are duſty, and, when examined, this duſt is found to be compoſed of antheræ, of an oblong figure, each affixed to it's own filament. The little protuberances of the reſt of the ſtalk are the coverings of ſo many cells, which contain each it's roundiſh placenta,

placenta, and on it a vaſt number of minute ſeeds. I met with this plant in Charlton-foreſt, and never ſaw it elſewhere. Micheli ſeems to deſcribe it under the name of Lichen agaricus terreſtris, digitatus, niger, apicibus alborufis, radice longiſſima reptatrice.

The other ſpecies of Xylariæ will eaſily be known by their names: they are, 1. The ſmall, black, cupreſſiform Xylaria, with white tops. 2. The yellow, military Xylaria of Vaillant; and, 3. The brown Xylaria, with red tops.

FUNGI.

Claſs the Third. Genus the Eleventh.

ÆCIDIUM.

ÆCIDIUM is a genus of Fungus, conſiſting of a tuberous, or merely cruſtaceous matter, of a tolerably firm ſtructure, and marked with round protuberances on the ſurface, which are the coverings of certain cells, in which both the male and female flowers of the plant are produced, though ſeparate from one another. The male flowers are compoſed of ſingle antheræ, each adhering to it's particular filament, which is very ſhort. The antheræ are oblong and tumid, and are placed on the upper part of the internal ſurface of the cells. The female flowers conſiſt of a placenta, of a fungous ſubſtance, all around which are placed ſmall, roundiſh ſeeds, each in it's ſeparate cell. Micheli is the only author who has diſcovered that there was any ſuch genus of plants as theſe, though ſome of the ſpecies are conſiderably large, and, one would think, could not be overlooked: he has confounded them, however, with the Xylaria before deſcribed; the cells, indeed, are of the ſame nature with thoſe of that genus, but, in all other reſpects, the plants are as different as thoſe of any two genera can be: nor is even the fructification, when accurately examined, at all alike, as appears from the generical characters. We have called this genus, diſtinguiſhed by it's peculiar cells, Æcidium, from the Greek οικιδιον, cellula.

1. *Æcidium tuberoſum reniforme.*

The tuberoſe, kidney-ſhaped Æcidium.

This ſingular plant ariſes from a broad and long baſe, from which it extends itſelf into a tuberous maſs, of an inch and half in length, and an inch in diameter, and in ſhape much reſembling a kidney. Sometimes a cluſter of theſe grow together, and form a maſs of a variouſly botryoide ſurface; but more uſually they grow ſingle and ſeparate, though very near one another. It is of a tolerably firm ſtructure, but light; it's ſurface is variouſly elevated, and is ornamented with a number of wart-like protuberances, riſing but to a little height, flat at the top, and frequently with a leſſer protuberance in the center. Theſe tubercles are the coverings of ſo many cells, which are of a roundiſh figure, and contain the antheræ, affixed to their upper internal ſurface, and the ſeeds affixed to placentæ in the lower part of the cavity. The antheræ are oblong, the ſeeds very ſmall and round. The colour of the whole plant is a duſky brown, ſometimes blackiſh. We have it frequent in ſome of our woods, growing to the dead ſtumps of trees near the root. Micheli calls it Lichen agaricus, craſſus, bovinum renem veluti repræſentans, niger et quaſi deuſtus. I have five ſpecimens of it, taken from the root of a holly, in the garden at the Spaniards at Hampſtead. Inſects of various kinds are apt to eat their way into it, and their exuviæ, and other remains, are often found in it, ſometimes almoſt at the center, ſometimes nearer the ſurface. The holes made by theſe creatures are to be carefully diſtinguiſhed from the cells of fructification of the plant. I have never ſeen any of it quite black, but the burnt-look, deſcribed by Micheli in his name, is very common in it, and very ſingular.

2. *Æcidium cruſtaceum cellulis maximis.*

The cruſtaceous Æcidium, with very large cells.

This is an extremely ſingular plant: it is of a ſoft, fungous texture, and of a duſky browniſh colour. It extends itſelf irregularly, in form of a thick cruſt, over the roots and ſtumps of decaying trees. It's dimenſions are uncertain, but it's thickneſs is uſually about

about a fifth of an inch. The ſurface is full of large and hemiſpheric tubercles, with an opening at their top. Theſe lead into the cells in which the parts of fructification of the plant are diſpoſed; the antheræ occupy the upper part, hanging by their ſeparate ſtamina, from the internal ſurface; the reſt of the cavity is filled by a placenta, to which adhere a great number of extremely minute ſeeds. We have this plant pretty frequent in our own woods, about the ſtumps and roots of decayed trees; but it is not regarded any more than the other ſpecies of this ſingular genus, many of which, doubtleſs, have fallen in the way of our botanical writers many times, but, from their having very little of the appearance of plants, have been overlooked by them. It is frequent in Hornſey-wood toward the latter end of November.

3. *Æcidium craſſius ſuperficie ſplendente.*
The thick, ſhining Æcidium.

This ſpecies adheres to the ſubſtance it grows on by a very broad baſe, from which it extends variouſly, ſometimes into a ſemicircular figure, ſometimes leſs regularly; it's ſurface is uſually full of large protuberances, and it's thickneſs frequently as much as it's length. In ſhape it often much reſembles the common agaric, but it's ſubſtance is harder, and it's colour black. It's whole ſuperficies is ſmooth and gloſſy, and ſeems as if covered with a glutinous fluid; but there are obſerved in it, when examined cloſely, a number of little prominences, leſs gloſſy than the reſt; they are of a roundiſh figure, and have each a perforation in their center: theſe lead into deep, cylindric cells, the internal ſurface of which, in the upper part, is covered very thick with ſtamina; the reſt of the cavity contains an oblong, cylindric placenta, to which adhere a multitude of ſeeds. This is ſcarce with us: I found it once on Mendip-hills, growing to the ſtump of a decayed oak. The maſs was as big as a man's fiſt, and ſemicircular: near it there were others, leſs regularly ſhaped. Micheli calls it Lichen agaricus, tuberoſus, niger, agarici officinalis facie.

The other ſpecies of the Æcidium will be eaſily diſtinguiſhed by their names: they are, 1. The white, thick Æcidium. 2. The black, thinner Æcidium, growing under the barks of trees. 3. The hairy, grey Æcidium, growing on old oaks. 4. The ſmall, blackiſh, bullated Æcidium, growing under the barks of decayed trees. 5. The white, ſcutated Æcidium, growing on the ground. 6. The tufted, black Æcidium. 7. The tufted, red Æcidium. 8. The ſmaller, tufted, pale-red Æcidium. 9. The ferrugineous, tufted Æcidium; and, 10. The duſty, black, tufted Æcidium: all theſe latter ſpecies grow either in the clefts and fiſſures of old trees, or between the bark and the wood.

F U N G I.

Claſs the Third. Genus the Twelfth.

CERATOSPERMUM.

CERATOSPERMUM is a genus of Fungi, conſiſting of a tough, fungous matter, diſpoſed into more or leſs regular figures, and producing ſlender bodies, in form of creſcents, for the reception of the parts of fructification. Theſe plants produce both male and female flowers ſeparate, but placed one among another. The male flowers are antheræ, of an oblong form, ſupported ſingly by ſhort and ſlender filaments. The female flowers we can diſcover nothing of, except the ſeeds, which are placed ſingly among the antheræ, each in it's ſeparate little cell.

1. *Ceratoſpermum orbiculare ſeſſile.*
The orbicular Ceratoſpermum without a ſtalk.

This is a very ſmall, as well as a very ſingular plant. It adheres to the ſubſtance it grows on by a broad baſe, and from this it expands itſelf every way a little, till it has formed a ſemicircular body, two thirds of which is the baſe, and is fixed down; the remainder is a little elevated, and forms the edges, ſo that the whole makes a kind of diſh a little hollowed: it's ſubſtance is tough and firm, it's colour black. In this ſtate it remains a conſiderable time; but, when the period of it's fructification comes on, it

produces, from the ſeveral parts of it's upper ſurface, oblong bodies, thickeſt in the middle, and pointed at each end, and bent into the form of a horn, or creſcent. Theſe adhere to the plant by one of their points, and the other uſually hangs over the edges of it. On the thicker part of this creſcent, or horn, there ſtand a vaſt number of ſingle antheræ, ſupported by ſhort filaments, and, among them, a great number of very minute oval ſeeds, each lodged in it's cell. The whole plant does not exceed the diameter of a large pea. I have it very frequent in our woods in February and March, on the ſtumps of old trees, and on rotten ſticks. Micheli calls it Ceratoſpermum nigrum minimum, diſcoides, e diverſarum arborum ramorum emortuarum corticibus, et præcipue corylo, erumpens.

2. *Ceratoſpermum pediculatum cavum.*
The hollow, pediculated Ceratoſpermum.

This is as ſmall a plant as the former, but ſomewhat more ſingular in it's figure. It riſes with a ſhort, thick, and rounded pedicle, which, at it's top, expands into a ſemicircular body, ſomewhat hollow, and reſembling a kind of cup. The whole plant is not more than a quarter of an inch high. It's cup, or hollow part, is ſcarce a ſixth of an inch in diameter. It is common to meet with the plant in this ſtate; but it's fructifications are more rarely ſeen. The whole plant is white, and of a tough fungous ſubſtance, the edges of the cup even and ſmooth, and the whole plant beſide a little hairy. When in flower, there ariſe a vaſt cluſter of little horns, or creſcents, forty or more, from the whole internal ſurface of the cup; they are fixed by one end, and are of a beautiful ſcarlet colour, ſo that, with the white of the cup, they make a very beautiful appearance. The two extremities of theſe horns are, at all times, naked, but the middle appears duſty, and, when examined by a powerful microſcope, is found to be covered over partly with antheræ, partly with ſeeds. The ſeeds are oval, and lie in ſmall cells; the antheræ are oblong, but more tumid than thoſe of the former ſpecies. This is frequent with us in woods, on the ſtumps of old trees. Before it is in it's ſtate of fructification, it much reſembles ſome of the common cup Fungus's. Micheli has alſo deſcribed this: he calls it Ceratoſpermum minimum cornucopiodes.

3. *Ceratoſpermum planum craſſiſſimum.*
The flat, thick Ceratoſpermnm.

This is a ſubaqueous plant. It extends itſelf over old wood that is laid in rivers, and over many other ſubſtances there, in form of a thick cruſt. It aſſumes no particular, determinate figure, but ſpreads in every direction where it has room. It is of a fungous ſubſtance, of a browniſh colour on the outſide, and white within, and is uſually full of cracks and holes; the ſurfaces of which are of the ſame colour with the external ſurface of the plant. In this form it will ſpread ſometimes to ten or twelve inches every way, and is often more than half an inch in thickneſs. It's ſurface is ſmooth and lubricous, as moſt other things are that lie long under water. From every part of it's ſurface there grow horns, or creſcents, of a duſky-browniſh colour, about a tenth of an inch in length, and of the thickneſs of a ſmall hair; on the ſurfaces of theſe, about the middle, there lie ſeeds of an oval form in their cells; the antheræ I have not yet ſeen, though I have, more than once, ſought after them. We have this ſpecies on the boards at the mill-tails in Buckinghamſhire in many places.

Theſe are all the ſpecies of the Ceratoſpermum hitherto known.

F U N G I.

Claſs the Third. Genus the Thirteenth.

ISARIA.

ISARIA is a genus of Fungi, conſiſting of ſtalks of a ſimple or ramoſe figure, formed of circular ſeries of fibres, arranged round a cavernous axis, and each fibre having at it's end a capſule, in which are the fructifications of the plant.

The

The Iſariæ produce diſtinct male and female flowers, both contained in the cavity of the ſame capſule, or cell. The male flowers are antheræ, ſtanding in cluſters, on very ſhort ſtamina. The antheræ themſelves are of a tumid figure. The female flowers conſiſt of a placenta of an oval figure, and gelatinous matter, to all parts of which adhere round ſeeds. The Iſariæ are all very ſmall plants, and the ſurface of them all is alike of a beautiful granulated ſtructure, it being all compoſed of globular bodies, applied as cloſely as poſſible to one another.

Micheli met with two ſpecies of this genus, which he very juſtly diſtinguiſhed from all the other Fungi, under the name of Puccinia. Whether the plants he examined, however, were not mature, or by whatever accident it happened, his account of their fructifications is very imperfect. We have called the genus Iſaria: From the Greek, *ις*, a fibre, theſe being the only known Fungi that are compoſed wholly of fibres, ſupporting the fructifications.

1. *Iſaria ramoſa varie diviſa.*
The variouſly, divided, ramoſe Iſaria.

This is an extreamly beautiful little plant. It riſes with a ſingle ſtem rounded, and of the thickneſs of a ſmall packthread; this runs up ſingle to about a third of it's height, and from thence begins to divide into a number of leſſer branches; theſe ramify again, and at length the whole forms a kind of little buſh, with the branches, all erect, and terminating in obtuſe points. The whole plant is of a deep orange colour, and it's height is more than half an inch. The ſurface of the branches, examined with a microſcope, appear beautifully and regularly granulated: when cut tranſverſely, and examined, they are found to conſiſt of a cylindric, cavernous core, around which are ranged ſeries of fibres very ſhort and ſlender, each, at it's extremity, ſupporting an oval body, which is the receptacle of the fructifications. This body, carefully opened, is found to contain a placenta of a gelatinous ſubſtance, and roundiſh figure, on which there lie great numbers of ſeeds. The ſurface of the cavity in many places alſo appears thick covered with a kind of duſt, which, when carefully examined, appears to conſiſt of antheræ affixed in cluſters to ſmall ſtamina.

This beautiful Fungus is common in Charlton-foreſt in Suſſex, growing to the decaying bodies of beeches and other trees. I never ſaw it elſewhere, nor has any author deſcribed it.

2. *Iſaria ſimplex.*
The ſimple Iſaria.

This is a very ſmall plant, ſcarce exceeding, at it's utmoſt growth, a quarter of an inch in height, or half as much in diameter. It grows to old wood, by a broad baſe, from which it riſes ſmaller all the way, to the top where it terminates in an obtuſe point. It is ſeldom quite ſtrait; uſually bowed, or bent a little: it's colour is a duſky whitiſh; it's ſurface granulated; when cut tranſverſely, it appears to be formed in the ſame manner as the former, of ſeries of rays or fibres iſſuing from a cone or central body, and each terminated by a capſule at the ſurface; we have this on dead ſticks, and ſometimes on old gate-poſts in damp woods.

Micheli has mentioned this ſpecies under the name of Puccinia non ramoſa major pyramidata. The fructifications in this are much leſs diſtinct than in the former; and in the following ſpecies, which was the only one, beſide this, that Micheli knew, they are ſtill leſs ſo, whence it is not wonderful that he did not perfectly diſcover them.

3. *Iſaria ramoſa bifida.*
The bifid ramoſe Iſaria.

This is an extreamly minute Fungus, but, when examined with the help of a good magnifier, it is a very beautiful one. It riſes with a ſmall ſingle ſtem, which almoſt immediately afterwards divides into two, and each of thoſe ramifications afterwards into two more, and ſo on, till the whole forms a little buſh of branches all dichotomouſly divided. The whole plant is ſcarce a quarter of an inch in height, and it's branches, as if too weak to bear their own weight, often droop and bend: a multitude of the

plants

plants generally grow together, and in that caſe they reſemble a hoar froſt, upon the ſubſtance they grow on. When examined by the microſcope, the ſurface appears granulated; and, when cut, the branches are found, like thoſe of the others, to be made up of filaments affixed to an axis, and terminated by little globular bodies. We have this ſpecies plentiful in January on old ſticks in Hornſey-wood. Micheli mentions it under the name of Puccinia ramoſa, bifurcata, minima.

The other ſpecies of Iſariæ will eaſily be diſtinguiſhed by their names: they are, 1. The ſimple, ſcarlet Iſaria. 2. The ſimple, ſnow-white Iſaria. 3. The ramoſe, white, larger Iſaria. 4. The brown, ramoſe Iſaria. 5. The very ſmall, black, ramoſe Iſaria.

F U N G I.

Claſs the Third. Genus the Fourteenth.

PHYSARUM.

PHYSARUM is a genus of Fungi, conſiſting of veſicles or hollow bodies reſembling inflated bladders of a roundiſh or oval figure, and ſometimes ſeſſile, ſometimes affixed to pedicles, in which hollow bodies are contained the parts of fructification. The Phyſara produce diſtinct and ſeparate male and female flowers. The male flowers are ſingle antheræ, adhering to ſhort filaments, and growing on the internal ſurface of the capſule. The female flowers are ſeeds very minute and round, affixed to placentæ, formed of multitudes of fibres, and often ſurrounded with a gelatinous matter. The capſules are always cloſed in all parts, and, when the ſeeds are to be diſcharged, they burſt irregularly: they contain only a ſingle cavity, and are formed of a ſingle membrane, and that uſually but a very thin one. In ſome the placenta is ſmall, and lies looſe in the cavity; in others it is larger, and fills it almoſt entirely up with the appearance of a reticulated ſubſtance. Micheli divides the ſpecies of Phyſara into three genera, under the names of Mucor, Lycogala, and Mucilago; but the characters are in general the ſame in all, and the diſtinctions principally owing to the different ſtate of the plants.

1. *Phyſarum capitulo rotundo, pediculo capillari.*
The round-headed Phyſarum, with a very ſlender pedicle.

This is a very common ſpecies, and conſtitutes one of the moſt frequent kinds of what we call mouldineſs. It conſiſts of a fine capillary pedicle, of a greyiſh colour, and perfectly pellucid; on the ſummit of which ſtands the capſule or head, which is round, colourleſs, and pellucid at firſt, but after a little time greeniſh, and more opake, and in fine black. This burſts irregularly when quite mature, and exhibits the appearance of a multitude of ſeeds mixed with a great number of filaments: but it opened with the point of launcet under the double microſcope, before it is quite ſo mature. The ſeeds are ſeen to be affixed to a placenta, which afterwards ſeparates into theſe filaments, and on the inſides of the capſule are alſo ſeen evident globules of farina. This is very common on animal and vegetable ſubſtances, kept damp, and decaying. Hook has figured it much enlarged in his Micrographia; Malpighi calls it, Mucedo capitulo diaphano, deinde viridi et nigro; and Micheli, Mucor vulgaris capitulo lucido per maturitatem nigro, pediculo griſeo.

2. *Phyſarum capitulo ovato, pediculo brevi.*
The oval-headed, ſhort-ſtalked Phyſarum.

This is a very pretty ſpecies, though extreamly ſmall. It riſes from the ſubſtance it grows on, with a very ſhort capillary pedicle; on the ſummit of which ſtands a head or capſule of an oblong oval figure. The whole plant is ſnow-white in colour; it is not more than a quarter of an inch in height, and the capſule makes two thirds of that meaſure. When mature, it opens irregularly, and is found to contain a placenta of it's own figure, almoſt entirely filling it up, and very thickly ſpread over

over with ſeeds. The antheræ are eaſily ſeen on the inner ſurface, with a good microſcope.

This ſpecies grows on rotten wood, and is very common with us. Micheli calls it, Mucilago minima clavæ effigie lactei coloris pediculo donata.

3. *Phyſarum ſeſſile ſubrotundum.*
The roundiſh Phyſarum, without a pedicle.

This ſpecies ariſes from a broad baſe, and extends itſelf gradually in a regular manner, in form of a globular, or nearly globular body; when full grown, it is of the ſize of a ſmall pea; and, ſeveral plants of it uſually growing together, they often reſemble a flat cake of a fungous matter, with a botryoide ſurface; in this caſe, however, where ſeparated, each is found diſtinct, and incloſed in it's own membrane, tho' injured, in it's figure, by the preſſure of the others. The colour of this ſpecies is grey; it's ſubſtance ſoft and tender, and, if opened, it is found to contain a placenta of a reticulated texture, filling up every part of it; this is formed of interwoven fibres, and contains a great number of ſeeds in it's interſtices; but the whole is ſurrounded, and it's ſpaces all filled with a glutinous matter, which runs out in drops, on wounding it, and carries the ſeeds away with it. This ſpecies is common with us on the moiſt ſtumps of trees. Micheli calls it, Lycogala griſeum majus.

The other ſpecies of Phyſarum will eaſily be diſtinguiſhed by their names: they are, 1. The ſmall, white, round-headed, long-ſtalked Phyſarum. 2. The little, white-tufted Phyſarum, without any pedicle. 3. The cream-coloured, ſeſſile Phyſarum. 4. The copper-coloured, ſeſſile, piſiform Phyſarum. 5. The ſcarlet Phyſarum, of the ſize of a millet-ſeed. 6. The ſmall, ſeſſile, kidney-ſhaped, yellow Phyſarum. 7. The red, hemiſpheric, pediculated Phyſarum. 8. The flat-headed Phyſarum. 9. The white, cruſtaceous, large, and irregularly ſhaped Phyſarum. 10. The grey, ſmall, globular, pediculated Phyſarum. 11. The white, cruſtaceous, ſeſſile Phyſarum. 12. The greeniſh, cruſtaceous, ſeſſile Phyſarum; and 13. The yellowiſh, cruſtaceous, ſeſſile Phyſarum. Moſt of theſe latter ſpecies have been deſcribed by Dillenius and others, under the improper name of Byſſi.

FUNGI.

Claſs the Third. Genus the Fourteenth.

MONILIA.

MONILIA is a genus of Fungi, conſiſting of a pedicle ſupporting a number of naked ſeeds, arranged together in ſeries like the beads of a necklace.

The Monilia all produce diſtinct male and female flowers. The male flowers are antheræ, placed on ſhort ſtamina, on the ſummit of the pedicle, or near the ſummit, ſurrounding it in form of a fine powder. The female flowers we are able to diſtinguiſh nothing of, except the ſeeds, which are arranged together in ſeries, by means of a glutinous matter, and ſtand ſometimes cloſe to one another, ſometimes more diſtinct. In ſome ſpecies theſe chains of ſeeds are laid along both ſides of the ſummit of the ſtalks; in others they are wound round in cluſters, and form a kind of tuberous knobs, which terminate it; in others they riſe at diſtances from the very ſummit of the pedicle, in form of fingers; and, finally, in others they riſe more numerous in this form, and join near their baſes, ſo as to form a kind of globule, with the extremities of ſeveral of the chains of ſeeds hanging down from them. Theſe cluſters of the ſeries of ſeeds are what Micheli took for placentæ; he has alſo divided this genus into two, under the names of Botrytis and Aſpergillus; but the differences, this diviſion are founded upon, are rather ſpecific than generical; we have therefore arranged them all together under one genus.

1. *Monilia capitata ſimplex.*
The ſimple capitated Monilia.

This is one of the ſmalleſt of theſe ſmall plants, but by the help of a microſcope it appears very beautiful. It riſes with a ſingle capillary ſtem, of the height of about a tenth of an inch, at the top of which are firſt ſeen a multitude of minute antheræ, in form of a fine powder, with the rudiments of the future ſeries of ſeeds very ſmall among them: after a very little time theſe antheræ diſappear, and the ſeries of ſeeds begin to grow up in their places. Theſe ſtand ſo cloſe, that they ſoon conjoin at their baſes, and form, in the whole, the appearance of a globular head, with the extremities of ſeveral ſeries or chains of ſeeds hanging from it. The whole plant is of a whitiſh colour.

It is frequent on old wood in damp cellars, and other the like places; the ſeeds, when ſeparated, as they may eaſily be, by ſhaking the ſubſtance on which the plant grows, are found to be of an oval figure. Micheli mentions this under the name of Aſpergillus capitatus, omnium minimus, ſeminibus ovatis.

2. *Monilia divaricata caule craſſiore.*
The divaricated Monilia, with a thicker ſtalk.

This is not at it's full growth more than a quarter of an inch in height, and it's top ſpreads to two thirds of that meaſure in diameter. It grows erect with a ſingle ſtem, ſomewhat thicker than that of the former; near the top this divides into five or ſix ramifications, on the ſummits of which are firſt ſeen the antheræ, in form of a fine grey powder, with the rudiments of the ſeries of ſeeds in little protuberances, down both ſides of the ſtalks: ſoon after the antheræ diſappear, theſe ſeries or chains of ſeeds grow larger, and, in fine, they cover all the extremities of the ramifications; they are roundiſh, very large in proportion to the ſize of the plant, and of a greyiſh colour, as is alſo the whole plant.

This ſpecies is common on dead ſticks, in our woods, in October and November. Micheli calls it, Botrytis comata, griſea, caule ſimplici craſſiore, ſeminibus rotundis.

3. *Monilia ramoſa extremitatibus globoſis.*
The ramoſe Monilia, with round extremities.

This is alſo a very little plant, rarely exceeding a quarter of an inch in height, and coming under the common name of Mouldineſs, as well as many others of this claſs. It riſes with a ſingle capillary ſtem of a greyiſh colour, which toward the top divaricates into ſeveral branches, and theſe again ſubdivide into others. At the extremities of theſe ſubdiviſions ſtand at firſt antheræ, in form of a fine white powder; but afterwards chains of ſeeds are produced there of the ſame grey colour, with the reſt of the plant, and, which rolling themſelves round, only the extremities of the ramifications give them that globular figure viſible to the naked eye, though the particles it is compoſed of are not diſtinguiſhable but by a very good microſcope.

This ſpecies is frequent with us, on decaying, vegetable ſubſtances.

The other ſpecies of Monilia will eaſily be diſtinguiſhed by their names: they are, 1. The ſmall, ſimple, white Monilia. 2. The blue-headed, ſimple Monilia. 3. The round-headed, gold-coloured Monilia. 4. The black-headed, ramoſe Monilia. 5. The ſmall, ceſpitoſe Monilia, with yellow heads. 6. The ſnow-white ceſpitoſe Monilia. 7. The black, ceſpitoſe Monilia. 8. The branched, white ceſpitoſe Monilia.

FUNGI.

FUNGI.

Claſs the Fourth.

Thoſe which grow under the ſurface of the earth.

Of this Claſs there is but one Genus.

TUBER.

TUBER is a genus of Fungus, conſiſting of a roundiſh or irregularly tuberous body, riſing into a number of pointed prominences on it's ſurface, and conſiſting of a ſoft fungous matter, full of winding cells.

The tubera produce diſtinct male and female flowers, in the ſame membraneous capſules.

Theſe capſules are of an oval figure, and are lodged in the body of the plant; on their inner ſurface there ſtand extreamly minute antheræ, in form of powder, which ſeem to adhere immediately to the membrane, without any pedicles. Theſe are the male flowers: of the female we only ſee the ſeeds, which are placed in an uncertain number, from two to ſix, in the cavity of the ſame capſule.

1. *Tuber prominentiis majuſculis elevatis.*

The Truffle, with large, high prominences.

This is the Truffle moſt frequent at the table, and the beſt taſted of all the kinds. It is of an irregularly tuberous figure, ſometimes round, ſometimes oval, and ſometimes oblong; at times alſo it grows ſinuous, and much more irregular. It's bark is variouſly raiſed into large and high prominences, terminating in a kind of points, and is of a duſky, browniſh colour, often looking as if burnt. When cut, the pulpy ſubſtance is of a duſky colour, and very full of winding cells; it is of a very agreeable flavour, and of a leſs ſpungy ſtructure than the pulp of the common muſhroom. The capſules in this ſpecies are very large, and of an oblong, oval figure; the number of ſeeds in each is various, but it rarely exceeds three, often there is only one. This grows to a very conſiderable ſize, where the ſoil ſuits it; the bigneſs of a man's fiſt is not uncommon with it. This ſpecies is a native of Italy, and does not ſucceed ſo well with us, as the next, which is natural to our ſoil. This is the ſpecies deſcribed by the botanical writers under the name of Tubera terræ edulia. The other ſpecies is not much known, as diſtinct from this, though it truly is ſo.

2. *Tuber prominentiis minoribus depreſſis.*

The Truffle, with ſmaller, and lower prominences.

This ſpecies grows to the ſize of a moderately large apple ſometimes, but the bigneſs of a pigeon's egg, or a little more, is it's more uſual ſtandard: it is of an irregularly roundiſh form, and of a duſky cheſnut colour on the ſurface. It's bark is raiſed into prominences, but they are lower, as well as ſmaller, than thoſe of the former, and terminate in more obtuſe points. The pulp is of a paler colour, and the cellular windings leſs frequent. This ſpecies has a very agreeable flavour, though not ſo high as the Italian kind. It's capſules are alſo much ſmaller, and of a roundiſh figure: we have this in ſeveral parts of England native. I have met with it in Leiceſterſhire pretty abundantly, where the hogs were the only creatures that had found out ſuch a delicacy, till I informed the neighbourhood of it. The firſt Engliſh Truffles we had an account of, were thoſe diſcovered, at Ruſhton in Northamptonſhire, by Dr Hatton; but they were of the Italian kind, and had been brought over with the earth about the roots of ſome trees, many years before planted there, and had continued to propagate themſelves from that time.

3. *Tuber*

3. *Tuber purpuraſcens ſuperficie granulata.*
The purpliſh Truffle, with a granulated rind.

This is the ſmalleſt of all the Truffle kind; it's general ſize is that of a nutmeg, ſometimes it grows to the bigneſs of a walnut, but it very rarely exceeds that ſtandard. It's bark is raiſed into prominences, in the manner of the reſt, but they are ſo ſmall, that they rather deſerve the name only of granules; they are roundiſh and obtuſe at the end; the colour on the ſurface is a duſky brown, the pulp is of a pale purpliſh colour, redder near the ſurface than toward the center. The ſmell is like that of the Truffle, but faint; the taſte ſubaſtringent, and very diſagreeable, with a ſweetneſs at the going off like that of Terra Japonica. The capſules in this ſpecies are very large, and they uſually have four, five, or ſix ſeeds in each. Theſe are natives of England, but they are not common with us. Merret, in Ray's Synopſis, ſpeaks of purple Truffles of the bigneſs of hazel nuts, which he met with in Hampton-Court park; they muſt have been of this kind. I have met with theſe in Yorkſhire, and in ſome parts of Wiltſhire.

Some authors have recommended a cataplaſm of Truffles, as a ſovereign remedy in quinſies. Cardan tells us of people almoſt miraculouſly cured by it. At preſent we know no uſe of it in medicine, but it is a favourite ingredient in our ſauces.

THE

Fungi.

Fungi which Grow Horizontally.

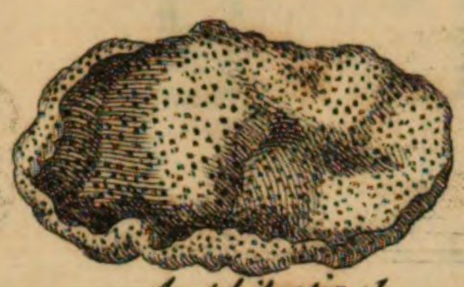
Plate 4. Pa. 72

Agaricus 11.

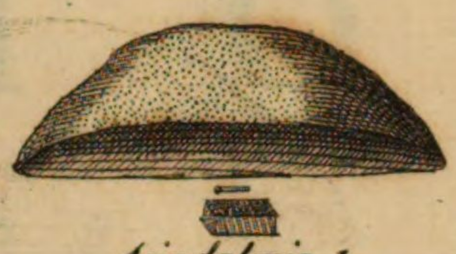
Poria 1.

Odontia 13.

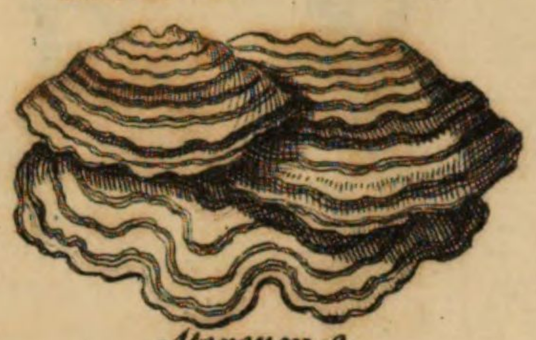
Agaricus 12.



Amphibretia 1.



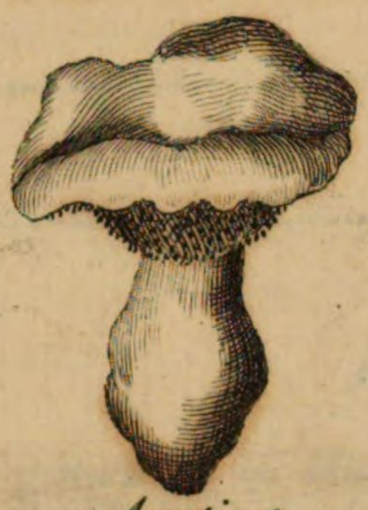
Scindalmia 1.



Stereum 2.

Erect Fungi consisting of Pedicles Crownd with Heads

Lepiota 3.

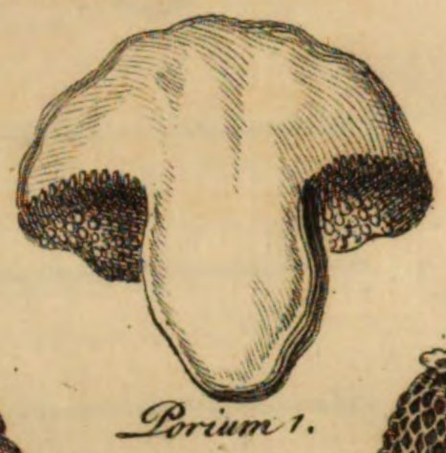


Acontia 1.

Solenia 2.

Solenia 1.

Leotia 1.



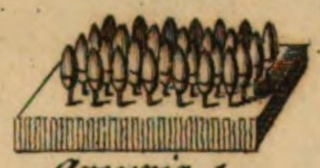
Porium 1.

Dictyaria 3.

Lepiota 15.

Erect Fungi which have no Heads

Clethria 1.

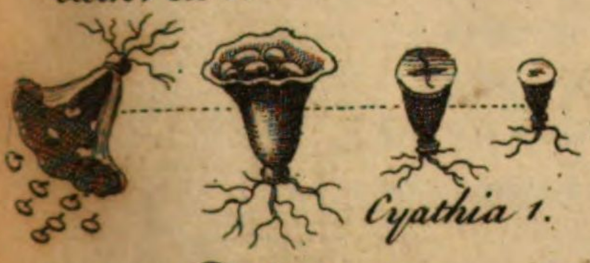


Arcyria 1.

Lycoperdon 3.

Lycoperdon 6.

Carpobolus 1.



Cyathia 1.

Encælia 2.

Clavaria 2.

Merisma 2.

Xylaria 1.

Acidium 1.

Ceratospermum 1.

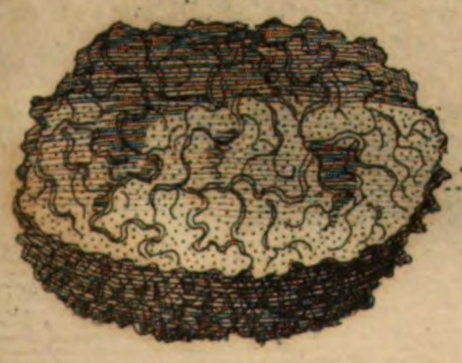
Ceratospermum 2.

Isaria 3.

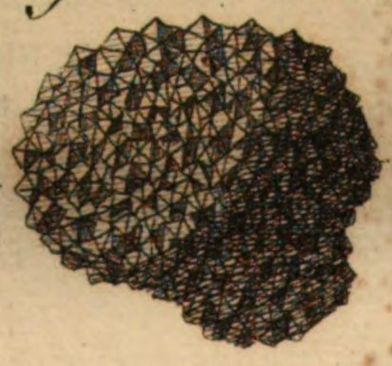
Physarum 1.

Monilia 1.

Subterranean Fungi growing in no regular Direction.



Tuber



B. Cole Sculpt.

THE

HISTORY

OF

PLANTS.

PART I.

BOOK III.

MOSSES.

IN the generality of plants the parts of fructification are diſtinct and obvious: in ſuch, therefore, nothing farther is neceſſary to the diſtinguiſhing them into claſſes and genera, than an obſervation of thoſe parts. In the Moſſes it is much otherwiſe; their fructification, notwithſtanding all the improvements that have been made in botany in the late ages, is yet but little underſtood. The ſeveral parts that ſerve to it are not eaſily diſcernible; nor is the uſe of thoſe which we can diſcover yet aſcertained. Linnæus has attempted to arrange them according to theſe, indeed, in his uſual method; but himſelf confeſſes, that he is not certain whether what he calls the male parts of the fructification are not the female, and, what he calls the female, the male; and we are to add to this, that almoſt all the parts of fructification, upon which the diſtinctions of his method are founded, are wanting in theſe plants.

Where characters of one kind are deficient to the great end of all characters, diſtinction, we muſt have recourſe to thoſe of another. We could wiſh to have been able to diſtinguiſh the genera of the Moſſes by their fructification alone; but, as there are not characters enough, or, at leaſt, enough are not yet diſcovered of that kind, we muſt take in others, from the general habit of the plants.

The Moſſes, a very numerous tribe of plants, may be thus divided into Seven Claſſes, the diſtinctions of which will be obvious, from the general form of the ſpecies; and, under theſe, the genera may be diſtinguiſhed by what is obvious of the fructification.

The Seven Claſſes.

Moſſes; Claſs the Firſt. Such as conſiſt of tender, flexile filaments.
Moſſes; Claſs the Second. Such as conſiſt of a mere foliaceous, or gelatinous matter.
Moſſes; Claſs the Third. Such as conſiſt of firm and rigid ſtalks.
Moſſes; Claſs the Fourth. Such as conſiſt of a dry, cruſtaceous matter.
Moſſes; Claſs the Fifth. Such as produce heads with opercula to them.
Moſſes; Claſs the Sixth. Such as produce capſules without theſe opercula.
Moſſes; Claſs the Seventh. Such as conſiſt of a foliaceous matter, with pedicles ariſing from it.

MOSSES.

Class the First.

Such as consist only of tender, flexile filaments.

Genus the First.

BYSSUS.

BYSSUS is a genus of Mosses, consisting of plain, simple, capillary fibres. No part of fructification has yet been distinguished in this Mos. It's filaments are uniform, and are often so fine as to be scarce discernible singly, though, in the cluster, they make a kind of fine down.

There has been a long dispute among the botanists, whether the Byssus were properly a Mos or a Fungus. Linnæus is of the latter opinion, most of the other botanists of the former. Dillenius thinks it is of a middle nature between both. Authors have been used to include two very different things under the name of Byssus; the one, the filamentose bodies we include under this name; the other, the dusty matter found on putrified vegetables. Dillenius has described many of these with the others, and Linnæus, who takes in the aspergillus and botrytes of Micheli into his genus of the Byssus, does the same. This, however, is confounding things; and from this, probably, arose the difficulty of ascertaining to what class of plants the Byssus belonged. The filamentose bodies, called by authors Byssi, are truely Mosses, of the nature of the confervæ, and other filamentose plants of this class; but the pulverulent kinds, or such as consist of globules, whether with or without pedicles, are all true and proper fungi, and have been described by us as such in their proper place. One would wonder what should induce botanists of such eminence as these to arrange things so very different under the same genus. Dillenius, indeed, rejects the botrytæ and aspergilli of Micheli from among the Byssi, though he retains some others there which evidently belong to the same family. His observation, however, that there would be no end of describing them, because they are of different forms, according to the nature of the putrifying matter they arise from, has but little of the botanist, or of the philosopher, in it.

The great distinction between the Byssi and confervæ is, that the former do not grow in the water, as the latter all do, and that they consist of finer, shorter, and more tender filaments. The Byssus, upon the whole, is a genus of plants that carries the least appearance of a vegetable nature in it of any known one. Dillenius, the most accurate of all writers on the Mosses, has described fifteen species of Byssus, properly so called. His whole number of plants under this name is twenty, but the first five of these are of the number of the fungus's, of the genus of the aspergilli. We have met with two other species of true Byssi, beside those described by Dillenius, which makes the whole number of Byssi known at this time seventeen.

We shall describe three of the more singular species of these at large; after which, the names will be sufficient to distinguish the rest.

1. *Byssus simplex tenuis, areolaris.*
The fine, simple, areolar Byssus.

This elegant little Mos grows in little clusters, or areolæ, usually of a circular figure. These seldom exceed a sixth of an inch in diameter, but there usually grow a considerable number of them near one another, so that it is easily distinguished at a distance. These clusters are composed of multitudes of extremely fine filaments, perfectly simple and uniform in their structure, scarce a twentieth part of an inch in length, but all perfectly erect, and of the same thickness from the base to the point. These filaments are of a pale-amethystine colour, or of a mixture of white and purple.

After the plant has passed a certain time in this form, the filaments all fall down, and, intangling with one another, they form a kind of membrane, covering the little spot upon which it first stood erect, with a thin crust. This becomes, in a little time, of

of a deeper purple, and, in fine, of a violet colour, and is even blackiſh, before it drops off.

It grows on the barks of trees, and, ſometimes, on the ſtalks of the larger moſſes. It appears in it's perfect or filamentoſe ſtate in November and December; after which, it remains till the end of February in it's ſecond form. Dillenius has deſcribed this under the name of Byſſus lanuginoſa, violacea, lignis adnaſcens, both in his Hiſtory of Moſſes, and in his edition of Ray's Synopſis of the Britiſh Plants. Micheli has deſcribed it twice, under two different names; firſt, under that of Byſſus purpurea, elegantiſſima, arborum caudicibus adnaſcens breviſſimis ac tenuiſſimis filamentis; and again, under that of Byſſus minima, cærulea, non ramoſa, muſco innaſcens.

I have obſerved it both on the ſtumps of trees and on the damp ſtalks of the great hypnum in Hornſey-wood, and have found it from the paleſt purple to the deepeſt blue on both. It's different appearance alſo, in it's ſecond ſtate, has miſled ſome into the taking it for a kind of agaric. Doody has deſcribed it under the name of Fungus violaceus, herpetis modo lignis irrepens; and Mr Ray, under that name, both in his Synopſis and his Hiſtory.

2. *Byſſus ſummitatibus barbatis.*
The bearded, topped Byſſus.

This is a conſiderably larger and more robuſt plant than the former. It grows in irregular cluſters, an inch or two in breadth, ſometimes conſiderably more, and conſiſts of filaments of the thickneſs of a human hair, and of near two inches in length. Theſe ſtand erect, their number rendering them a ſupport to one another. They are of an equal thickneſs throughout, and of a ſimple, uniform ſtructure; but, at their tops, they divide each into a great number of very delicate and ſlender filaments, twenty, thirty, or more, in number to each, which form a little bruſh, or beard, at the top of every filament, of about an eighth of an inch in length, and nearly as much in breadth. The ſuperficies of the whole cluſter is, by this means, rendered beautifully tomentoſe, or, as it were, downy.

The firſt appearance this little plant makes is very different from this of it's perfect ſtate. It conſiſts, while young, of a number of ſtrait, ſhort, uniform fibres, arranged ſo cloſely and uniformly together, that their ſurface reſembles the nap of a piece of velvet. The plant is, at this time, of a pale orange colour. When full grown, it is of a deep orange colour, with more red in it, and is flexile and tough, and the ſeveral filaments have ſometimes a kind of annular marks, in two or three places, which ſeem to denote three or four different periods of growth. It has no remarkable ſmell, but a ſubaſtringent taſte.

It grows on the rotten ſtumps of trees, and ſometimes on old boards. I have met with it very perfect and fine in January, in the woods about Harrow. Micheli ſeems to have meant this ſpecies by the name of Byſſus major, ſpeluncis et cellis vinariis innaſcens, latiſſima, primum alba, dein aurea, poſtea fulva, filamentis craſſioribus et longioribus fiſſilibus, in his Nova Genera Plantarum: but, if ſo, he was not acquainted with it in it's moſt perfect ſtate. Some have ſuppoſed it to be the Fungus Virginianus, barbatus, fœtidus, Baniſteri of Plukenet; but the want of ſmell alone is enough to diſtinguiſh it from that plant, which ſeems rather to be the fungus barbatus, quercinus, teterrimi odoris of Breynius, Eph. Germ. Dec. 1. Mr Doody evidently meant it, by the inartificial name of Pſeudoſpongia fungoides, fulva, lignis adnaſcens, in the Appendix to the ſecond edition of Ray's Synopſis of Engliſh Plants; and Dillenius, in the third edition of that work, and ſince, in his Hiſtoria Muſcorum, has deſcribed it under the name of Byſſus arborea, barbata, fulvi coloris.

3. *Byſſus ramoſa extremitatibus capillaceis.*
The branched Byſſus, with capillaceous extremities.

This is by much the moſt elegant of all the ſpecies of this genus. There ariſe from the ſame baſe ſix, eight, or ten ſtalks, which are of a flexile and ſomewhat tough texture, and of a whitiſh yellowiſh, or duſky colour. They are ſomewhat flattiſh in form, and of the compoſite kind, dividing, as they grow in length, into a multitude of other ſmall branches, and theſe all ſend out ſhorter and ſmaller ſhoots on each ſide, at ſmall diſtances. The whole plant grows to three or four inches in length, in the larger

larger ſpecimens; but, in many, it does not exceed half an inch. It always ſpreads out as much in breadth, or more, than it does in length, and the extremities of all the branches and ſhoots terminate in a ſort of broad and delicate filamentoſe expanſions: in ſome of theſe the filaments are perfectly diſtinct, and wonderfully fine; in others they coaleſce, and form a thin and ſeemingly membraneous ſubſtance; but theſe latter I have often obſerved, after a time, to open into the ſtate of the former, the fibres ſeparating themſelves, as they grow drier. The branches ſometimes riſe naked from the matter they grow to; ſometimes they have a kind of baſe of the ſame ſubſtance with their own, out of which they ariſe. It's branches do not ſtand erect, as the filaments of the other Byſſi in general do, but extend themſelves upon the ſubſtance they grow on, adhering every-where very firmly to it.

It grows ſometimes on old ſtumps of trees, oftener on rotten wood in cellars, and, ſometimes, on the decayed leaves of plants and trees, and a great variety of other ſubſtances. When it has ſufficient moiſture, it is uſually of a pure ſnow-white colour; where it has leſs, it is yellowiſh, or livid, and ſmaller. It is principally found in winter. I have met with very fine ſpecimens of it on decayed oak-leaves, in Cane-wood, near Highgate, in December. Dillenius has deſcribed and figured it, both in the third edition of Ray's Synopſis, and in his own Hiſtory of Moſſes, under the name of Byſſus tenerrime villoſa et elegantiſſime ramuloſa.

Of theſe three ſingular ſpecies of Byſſi, the two latter have ſcarce any others like them, the generality of the others being compoſed of ſimple, ſtrait filaments, and differing principally in their length and colour. They are, 1. A ſhort, green kind. 2. A complicated, purple kind, found on the bay-tree. 3. A flaky, ſnow-white one, found in cellars, 4. A ſhort, yellowiſh kind, with a membranaceous baſe. 5. The black, ſilky Byſſus of Micheli. 6. A yellowiſh kind, looking like coarſe cloth. 7. A fine green one, lying on the ground, and reſembling velvet. 8. A yellow, globular kind, growing on boards. 9. An orange-coloured, hair-like kind. 10. A black hair-like kind. 11. A ſhort, ſetaceous, white kind: and, 12. A tough, complex kind, of a duſky, blackiſh-green colour, found in great plenty on our wine-caſks. To theſe, which are all the kinds of genuine Byſſus deſcribed by authors, we are to add the two new ſpecies of our own. The firſt of theſe is a ſmall grey one, with round branches, more divaricated than any of theſe kinds: the other, a bearded one, like the ſecond ſpecies deſcribed here, but ſhorter, thicker, and divided into fewer filaments at the extremities: both theſe I found on Mendip-hills, growing near the bottom of the ſtumps of old trees.

Our wine-coopers have a cuſtom of uſing the twelfth ſpecies to ſtop the bleeding of freſh wounds, which purpoſe it anſwers very well: excepting this, we do not find that the Byſſi have been put to any uſe in medicine.

MOSSES.

Claſs the Firſt Genus the Second.

CONFERVA.

CONFERVA is a genus of Moſſes, conſiſting of oblong, capillary filaments, not uniform and equal throughout their whole length, but divided into joints of a cylindric or globular figure.

The Confervæ all of them grow in water; we have nothing whoſe place of growth is out of the water, that is at all like them. Their filaments are ſometimes ſimple, ſometimes branched, and are often extended to a great length; but no part of fructification has ever yet been diſcovered in any of them.

It has been a common error of botanical writers to confound the cylindric and tubular ulvæ of the ſlenderer kinds with the Confervæ, but the diſtinction is obvious: length and ſlenderneſs are not the generical characters of the Conferva, but it's geniculated or nodoſe ſtructure; every plant which wants this character is to be removed from the claſs of Confervæ, and conſequently all thoſe plants, called by Dillenius, Ray, and others, Confervæ ſimplices et equabilli filo protenſæ, are to be excluded this claſs; they will be found among the cylindric ulvæ.

Boccone

Boccone delivers it as his opinion, that the Confervæ have in reality no fructification at all: that they do not ariſe from ſeeds as other plants, but are formed of an unctuous matter, ſeparated from the water by mere juxtapoſition of parts. Dillenius favours the ſame opinion, and argues, that, as they are plants of a lower claſs than others, and approach more than any to the nature of foſſils, they may probably be formed as they are. There needs no farther anſwer to ſo unwarrantable a ſuppoſition as this, than to obſerve that it's original author Boccone extends it to the Fungi as well as the Confervæ. We have already diſcovered flowers and ſeeds in theſe laſt, and may probably, at ſome future time, in the former.

Dillenius, in his Hiſtory of the Moſſes, has deſcribed no leſs than forty-eight ſpecies of Conferva; one half of that number, however, is ſtruck off at once, by obſerving that the firſt twenty-four are of that kind called Simplices et non geniculatæ, and therefore are properly ulvæ.

As to the remaining half, after deſcriptions at large of three of the more ſingular ſpecies, a jointed ſimple one, a ramoſe jointed one, and a globular branched one, it will be ſufficient to diſtinguiſh the reſt of them by their names.

1. *Conferva geniculata ſimplex.*
Simple, geniculated Conferva.

This is a very ſingular plant, and is eaſily diſtinguiſhable at ſight. It conſiſts only of a ſingle filament of a cylindric figure, and of the thickneſs of a large horſe-hair of an equal bigneſs throughout the whole length, but divided by annular marks into a multitude of ſhort joints, of the figure of ſegments of cylinders. It has no root, nor does it adhere to any thing in it's uſual manner of growth, but floats looſe in the water uſually, at a middle depth, between the ſurface and the bottom. It's colour is a faint yellow, with an admixture of green, while in the water, but, when dried, it becomes whitiſh. Several of the filaments are uſually found together, variouſly entangled, and making looſe knots; if carefully explicated, however, they are found to be of a ſurprizing length: I have meaſured ſome of five feet and a half, and theſe not entire neither; they are tender, and eaſily broken. It grows not only in ſalt but in freſh water. I have met with it abundantly in the ditches below Greenwich; and in the river Nen below Peterborough there is no angling without frequently taking it out; it is uſually thicker, and ſomewhat ſtronger, in ſalt water, but in freſh rivers it grows to a ſurprizing length: in the river juſt mentioned, when the water is clear, it is common to ſee complicated congeries of it of half a yard in diameter, from which ſingle filaments of a vaſt length may be explicated, while the whole is in the water; but, if taken out, it collapſes, and the ſeparate filaments cannot be pulled out to any great length. Scarce any of the botanical writers have miſſed this obvious plant.

Imperatus calls it, Linum aquaticum; and Chabræus, Fucus capillaria dictus. Ray calls it, Filum marinum Anglicum, ſive Conferva paluſtris; and Tournefort, in his Elements, Alga ſublutea capillaceo folio. Micheli calls it, Corallina marina, ſetacea, nodoſa, viridis; and Dillenius in his Hiſtory, Conferva filamentis longis, geniculatis, ſimplicibus. It is obvious, from the different generical names under which we meet with this in the greateſt authors, how much a regular diſtribution of theſe plants into genera has been wanted.

2. *Conferva geniculata, ramoſa, plumea.*
The branched and feathered geniculated Conferva.

This is a Conferva of the ſmaller kind, but it is an extreamly elegant one. It grows to two, ſometimes to three inches in length, and is uſually affixed to ſome ſmall pebble, or other the like ſubſtance, at it's baſe. Four, five, or more ſtalks uſually riſe from the ſame baſe, and, while in the water, they ſpread themſelves ſo as to make a kind of roundiſh tuft of a very pretty appearance. Every ſtalk is a geniculated filament of a cylindric figure toward the baſe, but growing ſmaller near the top; almoſt immediately from the root, it ſends out lateral branches, which grow to an inch or two in length, and theſe, as well as the main ſtalk, which toward the top is ſcarce diſtinguiſhable from them, are terminated by cluſters of ſmall and elegant filaments, twenty or more in each cluſter, all of the ſame colour with the main branch, and all geniculated in the ſame manner. From the ſides of the main ſtalk, and of the

branches alſo all the way up, there grow little tufts of the ſame filaments, about a ſixth of an inch long, and perfectly like thoſe which terminate the ſtalks; ſo that the whole plant, ſeen in the water, looks like a tuft of an extreamly fine filamentoſe matter, the branches being all hid by theſe fine pencils. The colour of the whole plant is a deep but not unpleaſant green; it's ſurface, when dry, looks gloſſy, and is leſs tender than many of the other Confervæ: it grows only in freſh waters. The trout-rivers near Rickmanſworth afford a great deal of it. I have alſo met with it plentifully in Wiltſhire. Micheli found it in ſome rivers in Italy; and Dillenius received his ſpecimen of it from the late Mr Brecon, who found it in Munnow river in Herefordſhire.

Many of the botanical writers have deſcribed it. Plukenet calls it, Corallina geniculata, mollis, internodiis brevioribus; and Micheli, Corallina fluviatilis, nodoſa, capillacea, viridis, minima, ſerici modo lucens. Dillenius deſcribes it under the name of Conferva fluviatilis, ſericea, tenuis, but imperfectly, having never ſeen it growing, as he confeſſes; but having formed his deſcription on a dried ſpecimen, which could convey but a very imperfect idea of the plant. Barrelier has an elegant figure of a plant, which he calls Corallina criſtata minima, which in all reſpects agrees with this; but the author tells us, that it is white, or pale red, or purpliſh in colour: ours is always green, and does not loſe that colour, even in drying.

3. *Conferva nodoſa, ramoſa, æqualis.*
The branched, even, knotty Conferva.

This ſingular and elegant Conferva riſes uſually ſingle from it's baſe, where it is affixed to ſome pebble, or other ſolid body, at the bottom of the water. It's ſtalk begins almoſt immediately from the baſe, however, to divide itſelf into a number of branches, and theſe, as they aſcend, ramify and branch themſelves out ſtill farther, ſo that it forms, in the whole, an extreamly divaricated plant, of about three inches high ſometimes, but rarely, more. If it grow in clear water, where there are no other plants, it ſpreads out in a very beautiful manner a ſingle ſtalk of it, not thicker than a ſmall twine, branching into an extent of three inches every way in diameter, every part of which is well covered with the extremities of the filaments: if it happen to grow where there are other water plants, it uſually entangles itſelf about them, and loſes much of it's beauty, while in the water. It is ſingular in this ſpecies, that the branches continue equal in thickneſs, till very near their extremities. They are of a very beautiful ſtructure, ſeeming compoſed of a multitude of globular bodies, all of the ſame ſize, and arranged as cloſely and evenly in ſeries as poſſible. It's colour is a fine bluiſh purple: it is tender, and eaſily deſtroyed, and is of a gloſſy ſurface, and ſomewhat gelatinous to the touch.

It is an inhabitant of the freſh waters, and principally of the cold clear ones which form the lakes on our mountains. I met with it two or three times in Yorkſhire; and it is alſo found in Wales, but we do not find that it has been met with any where out of the Britiſh dominions, though ſo very elegant a ſpecies, that, if it occurred in other places, it is ſcarce to be ſuſpected that it would be overlooked. Dillenius deſcribes it under the name of Conferva Alpina, lubrica, filamentis nodoſis cæruleis.

Of the other ſpecies of Conferva, ſome are of the geniculated, ſome of the nodoſe kind; they are ſome of them found in our freſh waters, but the largeſt part of them are inhabitants of the ſea. Of the firſt kind or geniculated Confervæ there are, 1. A green kind, branched, but with ſhort ramifications. 2. A kind, with remarkably long joints. 3. One with branched extremities, called the river Beard. 4. A branched, marine kind, known by the name of the Sea-beard. 5. A more diffuſed one, called the Spreading Sea-beard. 6. A very ramoſe, freſh-water one, growing in round tufts. 7. A fine-branched, or woolly ſea-kind. 8. A ſilky, trichoide kind. 9. The palmated ſea-kind. 10. The large, gelatinous ſea-kind. 11. The fine-branched, gelatinous ſea-kind. 12. A very-much branched, ſmall ſea-kind. 13. The hollow, Sea-Conferva.

Of the nodoſe kinds there are, 1. A lubricous, pearly, Sea-Conferva. 2. A ſlippery, coralloide Sea-Conferva. 3. The large frog-ſpawn Conferva. 4. The ſmaller frog-ſpawn Conferva. 5. The tender, green, frog-ſpawn Conferva. 6. The black, lubricous Conferva. 7. The horſe-tail, river Conferva. 8. The ſea horſe-tail Conferva.

The

The ancients recommend the Confervæ, in general, as vulneraries, externally applied; and Pliny tells us ſome romantic ſtories of the uſe of them in caſes of fractured bones. At preſent we do not bring them into uſe at all; and it is moſt probable, that, in the times of the authors who mention them as vulneraries, they were uſed by the chirurgical people rather as bandages, than from an opinion of any peculiar virtue they poſſeſſed againſt wounds or fractures; ſeveral of the ſpecies, when lightly twiſted together, make a very ſoft, and ſufficiently ſtrong, ſubſtance for ſuch purpoſes as we ſuppoſe them to have been uſed for.

MOSSES.

Claſs the Second.

Such as conſiſt of a mere foliaceous or gelatinous matter.

Genus the Firſt.

PHYLLONA.

PHYLLONA is a genus of Moſſes, conſiſting only of a thin membranaceous matter, reſembling in ſome meaſure a leaf; of an uniform and even ſtructure, pellucid and moderately firm. No part of fructification has yet been diſcovered in any ſpecies of this genus.

The botanical writers, in general, have confounded three different genera of Moſſes, of which the Phyllona is one under the ſame common name; ſome of them have called them Ulvæ, others tremellæ. The firſt of theſe genera conſiſts of a ſimple, foliaceous matter; the ſecond, of tubular, cylindric bodies, formed of the ſame kind of matter; and the third, of a merely gelatinous ſubſtance. We have, to prevent future confuſion, ſeparated the firſt and laſt of theſe under new generical names; the ſecond we have retained the term ulva as a generical name for, to avoid a third new one, in a caſe where Linnæus had already appropriated a word to the ſame idea. The firſt of theſe genera takes in the foliaceous ulvæ and tremellæ of Dillenius, &c. The ſecond, the tubular tremellæ of theſe authors, and all the ſimple or equable confervæ; and the third, ſome vegetables all evidently of the ſame kind, though diſtinguiſhed by authors under the various names of Fuci, Corallinæ, and Algæ.

There are properly no more than ſix ſpecies of the Phyllona known at this time. A deſcription of one of them will be ſufficient: the reſt will eaſily be diſtinguiſhed by their names.

1. *Phyllona umbilicata.*
Umbilicated Phyllona.

This is much more regular in it's growth and general form than the others of this ſpecies: it grows to a ſtone or ſhell, or any other ſolid matter, at the bottom of the ſea, by a ſmall roundiſh baſe, ſcarce a quarter of an inch in diameter in the moſt elegant ſpecimens, in ſome much larger. From this baſe or umbilicus it expands every way, till it has formed a ſort of baſon or roundiſh hollow body: The baſe ſerves as the umbilicus to this general figure, and is the loweſt part of it. The whole conſiſts of a ſingle continuous ſubſtance, undulated or irregularly ſinuated at the edges, very thin, and reſembling, more than any thing elſe, a very fine parchment. It's colour is a duſky brown, with ſome tinge of purpliſh in it; it's ſubſtance much reſembles that of the common oiſter-green, but that it is firmer; and it's ſurface is ſmooth and gloſſy. It grows to four or five inches in diameter, but is ſeldom met with perfect, the ſand and other bodies waſhed againſt it tearing it to pieces.

It is not uncommon about our own ſhores, particularly thoſe of Kent and Suſſex, and, when entire, makes a very beautiful figure.

Moſt of the botanical writers have deſcribed this ſpecies; but, as they have taken more notice of it's colour, than of it's form and texture, they give but very imperfect accounts of it. Lobel calls it, Lichen marinus rubeſcens et flaveſcens; and John Bauhine and Chabræus give it under the ſame name; but the figures, as well as deſcriptions of theſe authors, ſhew that they had only met with ſmall or broken ſpecimens.

Ray

Ray and Moriſon both deſcribe it under the names of Fucus lichenis facie marinus. The Scotch who eat it call it *Slake*. Tabernamontanus ſeems to mean this ſpecies by the Lactuca marina, which he figures as the common one; but his deſcription is too ſhort to form any certain judgment from it. Imperatus deſcribes it under the name of Umbilicus marinus, and Moriſon and Ray, under thoſe of Fucus marinus umbilicatus, and Fucus, umbilicus marinus dictus.

The other five ſpecies are, 1. The common oyſter-green, or laver. 2. The ſmall Phyllona of our freſh water. 3. The oblong, verrucated Phyllona. 4. The oblong, ſmooth Phyllona; and 5. The linze, or faſciated Phyllona. All theſe are of the ſame tender texture with the common oiſter-green, and all are inhabitants of the ſea, except the ſecond: they uſually grow by a ſmall baſe to ſtones, and other ſolid bodies, near the ſhores.

MOSSES.

Claſs the Second. Genus the Second.

ULVA.

ULVA is a genus of Moſſes, conſiſting of a merely foliaceous matter, formed into oblong, cylindric tubes. Theſe tubes are ſometimes plain, ſometimes wrinkled. They uſually grow to a great length, and are of various diameters, but no part of fructification has ever yet been diſcovered in any of them.

This genus, as it includes what are called the tubular tremellæ, and with them all the ſmooth confervæ of authors, is conſiderably abundant in the number of it's ſpecies. They have all, however, ſo general an external likeneſs, that, after giving deſcriptions of two or three of them, we may very ſafely leave the reſt to be diſtinguiſhed by their ſeveral names.

1. *Ulva longa, tenuis, ſimplex.*
Long, fine, undivided Ulva.

This plant conſiſts merely of long, cylindric, capillary filaments; there grow ſeveral of them from the ſame baſe, fifty, a hundred, or more, from whence they extend themſelves to ſix, eight, or ten feet; they are of an equal thickneſs, or very nearly ſo, all the way, and are hollow, being compoſed of a thin tubular membrane, eaſily broken, of a deep green colour, and of a gloſſy ſurface. Theſe filaments are always ſimple, never ſo much as a ſingle ramification growing from them; they generally adhere at the baſe to a ſtone, ſometimes to a piece of board. Their common place of growth is in the clearer running waters, where they follow the courſe of the ſtream, extending their filaments to a ſurpriſing length.

This plant is deſcribed by all the botanical writers, but under various names: the generality have called it Conferva vulgaris, and ſuppoſed it the conferva of Pliny, which, he ſays, grows upon ſtones in the brooks on mountains, and is hair-like, and hollow. There are not wanting authors who deny a hollowneſs to this and the other confervæ, as they call them, of theſe ſimple and equable kinds; but it is owing to their imperfect obſervation of them; either they have not uſed the proper aſſiſtances in the examination, or elſe they have examined them at an improper time. When out of the water, the ſides of the tube are apt to collapſe and form a flat, ſolid body, and at certain periods of growth the cavity alſo fills up by nature, or at leaſt grows too ſmall to be diſcernible; but whoever will examine the confervæ, with the help of a glaſs in water, when at their full growth, and in their moſt perfect ſtate, will find a very manifeſt cavity in all of them: moſt he will find mere, thin, membraneous tubes. Lobel has figured this ſpecies under the name of Conferva Plinii; and Gerard, Parkinſon, Chabræus, and a great many others, who have given figures of it, have evidently only borrowed this of Lobel's. Aldrovand has indeed given a figure of his own of it, and has copied a deſcription from Pliny: it is pretty clear, that he never ſaw the plant; ſo that 'tis eaſy to gueſs what information is to be had from him. Micheli has given a new figure of it, and refers it to the Byſſi, whither alſo we ſhould have referred it, if, as authors, in general, have related, it's filaments were ſolid, and

not

not tubular. Authors deſcribe ſeveral confervæ, as they call them, which grow on land, and conſiſt of ſolid filaments; all theſe we refer to the Byſſi: but the tubular ones, which are all of them inhabitants of the water only, are to be referred to this genus, though at preſent divided by authors; among many others, Tournefort calls this ſpecies Alga fluviatilis, graminea, longiſſimo folio. Boerhaave, Muſcus aquaticus conferva dictus; and Bromelius, Fucus capillaceo folio. We meet with it alſo in the very beſt authors, who have written largely on theſe ſubjects, deſcribed many times over, in it's different ſtates, under various names, with conferva at the head of them. It is only in running waters that it can extend itſelf, as deſcribed here: theſe are it's proper place of growth, but it is often met with alſo in ſtanding waters, and ſometimes in foul puddles: in large and clear ponds it diffuſes itſelf every way, and ſeldom extends to a greater length than ten or twelve inches, in foul and ſhallow puddles; it often does not grow to more than two or three inches, and ſtands erect. In both theſe and many other appearances of the ſame kind the plant is wholly the ſame, though it is not under exactly the ſame form.

2. *Ulva ramoſa, ſubrigida, brevis.*
Short, rigid, branched Ulva.

This is a plant of conſiderable beauty in it's diviſions, and while in the water, with it's ramifications all extended, makes a very pleaſing figure. It grows to three or four inches in length, ſometimes it is much leſs, rarely more. It riſes from a ſmall flat baſe, fixed on ſome pebble, or other ſolid ſubſtance, and from a ſingle ſtem divaricates into a multitude of parts, each of which ſends off a number of lateral branches, all dividing into ſtill ſmaller, till, at the extremities, they become almoſt imperceptible. Sometimes only one main ſtem ariſes from the baſe; ſometimes two, three, or four, in which caſe it is leſs diſtinct, but extends farther. It's colour is a duſky green; it's larger branches have a cavity in them pretty large, in the ſmaller it is leſs perceptible: it is of a finer ſtructure than moſt of the other Ulvæ, and leſs flexile. It grows in rivulets, brooks, and other running waters, and is frequent enough in many parts of England. Several of the botanical writers have mentioned it, under the name of Conferva fluviatilis fibrilloſa.

3. *Ulva ſinuoſa ſimplex.*
Simple, ſinuous Ulva.

This is an extreamly ſingular ſpecies, and is ſo different in it's figure and ſize, according to it's time of growth, and the water it is in, that it might eaſily lead people into an opinion of it's being, under theſe ſeveral ſtates, ſeveral different plants. It is uſually ſimple, but ſometimes it divides into a few ramifications. When full grown, it is of the thickneſs of a ſheep's gut, and of three, four, or five feet in length. It is at this time a mere membranaceous tube; the membrane itſelf is not thicker than a fine paper, and it's cavity ſuch as will admit a man's finger: the cavity of the ſmaller ſpecies may be better underſtood by that of this large one, than by any examination of themſelves; for they appear to be all alike in this reſpect, it is continued through the whole plant, and has no valves, or any thing to intercept it. The ſurface of the tube is full of wrinkles and ſinuoſities, very deep, and very irregular; the membrane it conſiſts of is very tender, and is at firſt of a yellowiſh colour, afterwards greener, and ſometimes browniſh: while young, it is leſs ſinuous; and, as it grows, if it have plenty of water, and that of a proper degree of ſaltneſs, it will run into a multitude of luxuriant figures. It is common in ſalt water ditches, and about the ſea-ſhore in ſome places. We have it in great plenty in the ditches about Greenwich and Woolwich, where it grows to a vaſt length. It is naturally affixed at the baſe to a ſtone, or to ſome other ſolid body; but it frequently breaks off, and the greateſt quantities of it are found floating looſe on the ſurface of the water. It is moſt frequent in ſalt waters, and then grows moſt luxuriant; but it is not wanting in our freſh ones. Mr Brown met with it in Shropſhire, and I have ſeen it in the ponds in Wiltſhire, in many places.

It is ſo ſingular a plant, that ſcarce any of the botanical writers have miſſed it, but they have deſcribed it under many different generical names. Tournefort and the Bauhines make it a fucus; they call it Fucus cavus, and Fucus tubuloſus. Imperatus calls it Cava; Ray, Lactuca marina tubuloſa; Plukenet, Lichen fluitans tubuloſus; Buxbaum, Conferva latifolia, flaveſcens, intus cava; and Linnæus, Ulva tubuloſa ſimplex: our common people call it the Sea Chitterling.

As to the other ſpecies of the Ulva, it is not eaſy to aſcertain them: nothing is more certain than that, in this genus, the ſame ſpecies, in it's different ſtates, has been deſcribed frequently for ſeveral different ones. What ſeem moſt evidently and indiſputably different ſpecies, are, 1. of the conferva kind, as they are called: there are, 1. The ſmall, byſſus-like Ulva. 2. The forked Ulva. 3. The white, ſilky Ulva. 4. The fennel-like Sea-Ulva. 5. The forked, briſtly Ulva. 6. The ditch, hairy Ulva. 7. The cottony Ulva. 8. The flocky Ulva. 9. The reticulated, fine Ulva. 10. The ſpungy Ulva. 11. The ſhort, divaricated Ulva. 12. The cancellated Ulva. 13. The feathered Ulva.

2. Of thoſe called Tremellæ by authors there are, 1. The bladder-headed Laver, or Ulva, deſcribed by Dillenius; and, 2. A ſhort, ſmooth, and thick kind, conſiſting of a much tougher membrane than the reſt, which I have met with about Bognor Rocks in Suſſex.

Let it not appear ſingular that, in this diſtribution of the Moſſes, we have allowed no ſuch genus as the ſmooth Confervæ, ſo many ſpecies of which are deſcribed by authors. There can be no ſuch genus, ſince a Moſs compoſed of tender and ſmooth filaments, if thoſe filaments are ſolid, is a byſſus; if they are hollow, it is an Ulva. The ſpecies deſcribed by authors, under the names of Confervæ ſimplices, and equabiles, are partly of the one, partly of the other of theſe genera; the land kinds are, in general, byſſi, and their names are given, at the end of our account of that genus; the water ones are Ulvæ, and mentioned among the firſt ſeries here.

MOSSES.

Claſs the Second. Genus the Third.

COLLEMA.

COLLEMA is a genus of Moſſes, conſiſting merely of a gelatinous matter, reſembling boiled glue, or ſize.

This is ſometimes diſpoſed in form of filaments, ſometimes of membranes, ſometimes of neither, but perfectly ſhapeleſs. No part of fructification has ever yet been diſtinguiſhed in any of the ſpecies of this genus.

Authors who have written on theſe ſubjects have been acquainted with many of the ſpecies, but, as no generical character has before been eſtabliſhed for them, they have arranged them among the Confervæ, Ulvæ, Tremellæ, and Lichenoides, though it is evident that they have not the characters of any one of thoſe genera. Where the only obvious character, indeed almoſt the only character, of a ſet of plants appears in their texture, it muſt be allowed us to take the generical character from that. As to the claſs they belong to, it is evidently that of the tender, foliaceous Moſſes, as their whole ſubſtance ſeems no other than a diſtended matter of the ſame kind, and, in all of them, dries up to a membraneous ſubſtance, wholly like what others naturally exhibit. We ſhall here, according to our cuſtom on the other occaſions of this kind, deſcribe four or five of the ſpecies at large, after which the others will be eaſily diſtinguiſhed by their names.

1. *Collema filamentoſum craſſius.*
Thick, filamentous Collema.

This is an aquatic ſpecies. It extends itſelf in form of a thick, gelatinous matter, over ſtones, and other ſolid bodies, in our clear brooks and rivulets. The maſſes of it are three, four, or more inches in diameter, and of half an inch frequently in thickneſs. It is extremely lubricous to the touch, and is ſo tough as not to be eaſily broken to pieces. It's colour is a deep duſky purple. It appears, at firſt ſight, a mere maſs

of

of jelly, but, when more nearly examined, it is found to be compoſed of a multitude of long, cylindric filaments, of a mucous, or gelatinous ſubſtance, interwoven with one another in various directions, and laid ſo cloſe every-where, as to join, and, together, to form this ſeemingly rude maſs of jelly. Such is the condition of this Collema, when in it's recent and freſh ſtate; when dried, it becomes a thin membrane, like parchment, of a fine, deep, violet purple; and the cylindric filaments it is compoſed of are then very diſtinctly viſible; they are ſlender, every-where of the ſame diameter, and perfectly reſemble thoſe of the byſſi and finer ulvæ.

I have met with it in ſome of our trout rivers in Buckinghamſhire, where it renders the ſtones ſo ſlippery, that, if the neceſſities of the ſport lead people a little way into the water, there is no ſtanding upon them. It is alſo found in the brooks among the Welch mountains.

Some of the botanical writers have mentioned this. Dillenius makes it a conferva, and gives a tolerably perfect deſcription of it, under the name of Conferva mucoſa, confragoſis rivulis innaſcens.

2. *Collema filamentoſum tenuius.*
The thinner, filamentoſe Collema.

This is a ſpecies of which the naturaliſt can preſerve no ſpecimen. It is ſcarce poſſible to take it up out of the water, without deſtroying it, and wholly impoſſible to make it retain any thing of it's form, in drying.

It grows in ſmall and roundiſh cluſters, or globules, at the bottom of ſtanding waters, and conſiſts of a multitude of ramoſe filaments, of a tender, gelatinous matter, which interſect one another in many places, and every-where cohere ſo as to form, in the whole, a maſs of an uniform, gelatinous ſtructure. It's colour is a duſky green, with an admixture of brown; it's texture ſo extremely tender, that it falls to pieces on almoſt the leaſt touch, and, if attempted to be dried with the utmoſt care, it only leaves a ſmall, thin, and ſhapeleſs membrane. It grows to the mud at the bottom of ſtill waters, and often in ſuch quantities, as to cover almoſt the whole ſurface of it. It is very frequent about towns where the filth continually waſhed into the ditches fills them with a light and looſe rich mud.

The botanical writers have not miſſed this; and the appearance of fibres in it's texture has made them range it among the confervæ. Ray calls it Conferva gelatinoſa, omnium tenerrima et minima, aquarum limo innaſcens; and Dillenius has deſcribed it, under the ſame name, in his Hiſtory of Moſſes. It is either peculiar to England, or, to the credit of the Engliſh botaniſts, it is a plant overlooked by thoſe of all other nations.

3. *Collema dichotomum.*
The dichotomous Collema.

This is not only the moſt beautiful of the whole genus of the Collema, but is one of the eleganteſt of the whole tribe of Moſſes. It grows to the length of three or four inches, and it's thickneſs, in the largeſt part, is that of a ſmall packthread. It adheres to ſome pebble, or other ſolid ſubſtance, at the baſe, and riſes with a ſingle ſtem, which ſoon divaricates into two, each of thoſe into two more, and each of theſe ſubdiviſions ſeparate again and again in the ſame manner, till, at the extremity, there are often fifty, ſixty, or more branches. It is, throughout, of an elegantly-jointed ſtructure: the joints are oblong, and ſomewhat larger at their tops than at their baſes, ſo that it reſembles the ſtructure of ſome of the corallines in appearance. The whole conſiſts of a gelatinous ſubſtance, ſo ſoft that it is eaſily deſtroyed in handling. It's colour is a pale purple, ſometimes whitiſh. It is difficult to take it up entire; but, if dried, it becomes an extremely thin and tranſparent membrane, adhering very firmly to the paper by it's own glutinous quality.

It is a marine plant, and is not uncommon about our own ſhores. I have met with it very frequently about the Iſland of Sheppey, and once on the Bognor Rocks in Suſſex.

It has been deſcribed by ſome of the botanical writers under the name of a Conferva, and, by others, under that of a Coralline. Dillenius calls it Conferva marina gelatinoſa, corallinæ inſtar geniculata, craſſior; and Kempfer, Muſcus marinus, corallinæ ſimilis, multifidus, folio tenuiſſimo.

4. *Collema compreſſum.*
Flatted Collema.

This is a ſpecies extremely different from all the former in it's configuration. It conſiſts of a number of branches, or ramifications, ariſing from one common baſe: theſe grow in all directions, and uſually form, upon the whole, a figure approaching to circular. They are of the ſame gelatinous and tender ſubſtance with the reſt of the plants of this ſpecies; and, near the baſe, where they ſtand cloſe, they cohere and run together ſo as to form a confuſed, gelatinous maſs, of the breadth of an inch, or more, and nearly of the third of an inch in thickneſs. From the edges of this, the branches run to half an inch, or thereabout, in length, and are variouſly divaricated and thick, but flattiſh. The colour of the whole is green, and it's ſubſtance that of a ſtiff jelly. It grows to poſts and old boards, under water, in ſalt ditches. I have met with it in Canvy Iſland in Eſſex abundantly. The botanical writers have ſome of them deſcribed this, but under the odd generical names of a fucus, a conferva, and a tremella. The late Dr Manningham, who ſeems to have been the firſt that diſcovered it with us, called it Conferva gelatinoſa, damæ cornua repræſentans; and, under that name, it ſtands in Ray's Synopſis of Britiſh Plants. Vaillant calls it Fucus fontanus, pinguis, corniculatus, viridis; and Dillenius retains Dr Manningham's name, only that he changes the generical term from Conferva to Tremella.

5. *Collema ſinuoſa fugax.*
Sinuous, fugacious Collema.

This is the leaſt permanent of all the ſpecies of this genus: it decays almoſt as quickly as the aquatic kinds, when expoſed to the air, and is ſeldom half an hour in the ſame ſtate. It is a mere gelatinous ſubſtance, variouſly divided into a kind of lobes, of an irregular figure, an inch or two in length, and near as much in breadth, and often above half an inch in thickneſs: theſe lie irregularly over one another, and conſtitute, as it were, one maſs of jelly, the ſurface of which is variouſly ſinuated. The lobes are a ſort of very thick membranes, of a tender and ſoft texture, and ſhake like a maſs of ſize, or thick jelly, on the ſlighteſt touch. Their colour is at firſt a deep dark green, and afterwards yellowiſh. When dried, they become thin membranes, tranſparent, and ſcarce thicker than leaf-gold. It grows on the ſurface of the earth, though it is ſcarce poſſible to diſtinguiſh any roots by which it adheres to it, and is common in rainy ſeaſons, in ſpring and autumn, in meadows and in garden-walks. It grows very quick in the wet, but, as ſoon as the rain is over, the ſun and wind preſently dry it up. If it's growth be traced from the earlieſt viſible period, it is found, at firſt, in ſmall globules, eight, ten, or more in a cluſter: theſe are as big as great pin's-heads, and, by degrees, increaſe in ſize, and each furniſhes one of the lobes already mention ed, which adhere one to another, ſome more firmly, others more ſlightly, and ſo form the whole plant.

Scarce any of the botanical writers have omitted the mention of this plant; nor have the chemiſts been leſs fond of it: the vulgar well know it too, and are apt to believe it ſomewhat preternatural; our common people ſuppoſe that it is the meteor which they know by the name of a falling ſtar, dropped on the ground. The Swedes, Linnæus tells us, take it for a fragment of a cloud, tumbled down by ſome accident. Paracelſus gave it the whimſical name of Noſtoch, which it has retained with many people ſince. Micheli eſtabliſhes it into a genus, and calls it Linkia: Mentzel makes it a Lichen, and Vaillant calls it Muſcus fugax, membranaceus, pinguis. Ray, in his Synopſis, calls it Ulva terreſtris, pinguis, et fugax: Linnæus, Byſſus gelatinoſa, fugax, terreſtris, though not very properly according to his own generical characters. Dillenius, in his Catalogus Giſſenſis, calls it a Lichenoides, but, in his Hiſtory of the Moſſes, he makes it a Tremella.

The other ſpecies of Collema are, 1. A fine-branched Sea-Collema. 2. The buſhy, larger Sea-Collema. 3. The filici-form Land Collema. 4. The black, tough, Tree-Collema, called by the vulgar Witches-Butter: and, 5. The bladdery Collema.

The Collema ſinuoſa fugax, or Noſtoch, is the only ſpecies of this genus that was ever thought of for medicinal purpoſes. It is recommended by ſome, as an external remedy for ulcers; and ſome have given it internally, as an anodyne. The chemiſts

are fond of a notion, that a ſpirit may be drawn from it fit for the radical ſolution of gold; but this is about as probable as their other imaginations. Chemically analyſed, it is found to contain a great quantity of phlegm, an eſſential oil, a volatile, urinous ſpirit and ſalt, and a ſmall quantity of a fixed alkaline ſalt. Theſe are principles contained, more or leſs, in almoſt all vegetables, but, in general, the Moſſes of this kind afford more of them than what are called the more perfect plants; and may be ſuppoſed, therefore, to poſſeſs many virtues, were they to be examined more at large than has yet been done. The common people in Leiceſterſhire give this internally in fevers, and, as they pretend, with great ſucceſs; but it is not only in the mouths of the vulgar that the good effects owing merely to the efforts of nature are attributed to medicines.

MOSSES.

Claſs the Third.

Such as conſiſt of firm and ſomewhat rigid ſtalks.

Genus the Firſt.

USNEA.

USNEA is a genus of Moſſes, conſiſting of mere filaments only, but theſe of a tough and firm texture, and exhibiting on their ſurfaces ſome appearance of a fructification, in a kind of ſcutellæ, or orbicular bodies, growing from ſeveral parts of them, ſometimes from the ſides, ſometimes from the extremities. The ſpecies of Uſnea deſcribed by authors are no leſs than ſixteen, to which we are to add three very diſtinct kinds, which have hitherto eſcaped notice. We ſhall deſcribe two or three of the more ſingular Uſneæ at large, after which the names will be ſufficient to diſtinguiſh the reſt of them.

Micheli has gone ſo far as to deſcribe the fructification of the plants of this and the ſucceeding genera particularly. He tells us that theſe ſcutellæ are the parts which contain the male flowers, and that the female flowers, and the ſeeds which ſucceed them, are diſperſed in the manner of a fine powder on other parts of the plants, ſometimes on other plants of the ſame ſpecies. Some obſervations of our own, however, have led us, though we greatly honour Micheli, not to pay quite ſo much reſpect to theſe his diſcoveries as to eſtabliſh genera from them, as Linnæus has done: in objects ſo minute there is infinite difficulty in the way of a perfect explication.

1. *Uſnea villoſa implicata.*
The tufted, tangled Uſnea.

This is the largeſt and moſt conſpicuous of all the Uſneæ: it hangs in great tufts from the bodies of old trees, and it's extremities have ſo much the appearance of hairs, that it has obtained the general name of a hairy, or bearded, tree Moſs. It grows from a firm baſe, affixed to the bark of ſome old tree, and generally riſes from it with a ſingle ſtem. This is about the thickneſs of a common packthread, and, from it's bottom to the extremity almoſt, ſends off a vaſt number of lateral branches; theſe ſend each a number of others off, and theſe are again the parents of others, which, at laſt, terminate in long and ſlender filaments, ſcarce thicker than horſe-hairs: theſe ſurrounding the main ſtalk every way, and all ſending their ramifications ſtrait downward, the whole has the appearance of a great tuft of long hair; and the ſeveral branches, in their way down, intangling with one another, give it a ſtrangely complicated appearance. Theſe filaments, as well as the main ſtalks, are ſomewhat rigid, and very tough: they conſiſt of a ſoft bark, and a harder internal ſubſtance. The whole plant is of a pale aſh colour, or grey. At the extremities of the filaments, and ſometimes on other parts of the plant, there grow orbicular ſcutellæ; theſe are of a ſixth of an inch, or thereabout, in diameter, and are ſo lightly hollowed, that they appear almoſt flat: they are of á pale grey on the upper ſide, and browniſh below, and have a ſort of hair like radii about them.

It grows in thick foreſts, and is very common in Germany and Poland: with us it is more rare. I have met with it, however, in prodigious abundance in Charlton-foreſt in Suſſex.

The botanical writers, in general, have deſcribed this Moſs: it was long in uſe in the ſhops, under the name of Uſnea. Geſner and Ruellius deſcribe it under the name of Muſcus arborum; Muſcus arboreus is alſo a name many have called it by. Aldrovand calls it Anthelos fagi, and Dillenius, in his Catalogus Giſſenſis, Conferva arborea cinerea; but, in his Hiſtory of the Moſſes, he has called it Uſnea, and, very judiciouſly, eſtabliſhes a genus under that name. Micheli calls it Lichen cinereus, longiſſimus, barbatus receptaculis florum rufeſcentibus coronatis; and Linnæus, Lichen ramis filiformibus ramoſis pendulis confertis, in his Flora Laponica: but this Michelian genus of Lichen is much too large, and is eſtabliſhed on too vague principles.

2. *Uſnea divaricata dura.*
Hard, divaricated Uſnea.

This ſingular ſpecies of Uſnea rarely grows to more than five inches in length. It riſes ſingle, from a ſmall, flattiſh baſe, but it's ſtem immediately divides into two or three parts, and theſe, as they extend themſelves, divaricate again and again in the ſame manner; ſo that, after the firſt quarter of an inch from the baſe, it is impoſſible to ſay which is the main ſtalk, or, indeed, that there is any ſuch. It's branches are of a rounded figure, gradually growing ſmaller as they approach their extremities; they are remarkably hard and rigid, feeling ſomething like an iron wire to the touch: notwithſtanding that they branch out ſo freely, the whole never forms a thick tuft, the divarications fall ſeveral ways, and leave the plant very looſe and open. The colour of the whole is a greeniſh grey, where it thrives well; in other places it is browniſh, and often does not grow to much more than an inch in length. It grows on old trees, and ſometimes on poſts, and even on ſtones. It neither hangs down, as the preceding Uſnea, nor ſtands erect, as the following ſpecies, but creeps every way upon the ſubſtance it grows on, and often adheres firmly to it. At the tops of the divarications there grow ſcutellæ, of an orbicular figure, and greyiſh colour, ſomewhat hollowed, and ornamented with a number of cirri, or ſhort hairs, at their edges. It is a very ſcarce ſpecies, and the ſcutellæ are yet more rarely found upon it. I have met with it in the foreſt of Dean in Glouceſterſhire, but never ſaw any ſcutellæ on it there; in Northamptonſhire, near Peterborough, I met with it on a rotten gate-poſt, with four ſcutellæ on one plant. Many of the late botanical writers have been acquainted with it: Merret, in his Pinax, calls it Muſcus caule rigido fili inſtar chalybei. Plukenet and Ray alſo diſtinguiſh it by the ſame name. Buxbaum calls it Lichen capillaceus ſetæ equinæ inſtar rigidus, ex fuſco virens: Celſius, Lichenoides caule rigido; and Dillenius, in his Catalogus Giſſenſis, makes it a Conferva arborea; but, in his Hiſtory of the Moſſes, he deſcribes it under the name of Uſnea rigida horſum vorſum extenſa.

3. *Uſnea ramoſa craſſior.*
Thick-branched Uſnea.

This ſpecies adheres to the tree on which it grows by a woody tubercle, often of conſiderable thickneſs. From this baſe there riſes a ſingle ſtalk, of the thickneſs of a packthread; this ſends off, on every ſide, a number of branches, and is itſelf continued to the very extremity, but leſſening in diameter all the way. The whole plant is uſually about an inch and half, or, at the utmoſt, a little more than two inches high, and the main ſtalk, as well as the ſeveral branches it ſends off, are furniſhed with a number of fibrils, like ſhort hairs, all the way up, and both the main ſtalk, and theſe branches, terminate in ſuch. The colour of the whole plant is a grey, ſometimes with a caſt of yellowiſh in it. At the extremities of it's branches ſometimes, though rarely, there grow orbicular ſcutellæ, like thoſe of the others; they are flat, a little hollowed, and of the breadth of a ſix-pence, and are cirrated, or hairy, at their edges.

It is a very common ſpecies, growing abundantly on almoſt all our old trees. It ſtands erect on them, and is ſufficiently robuſt and rigid. It is not very frequently, however, found with it's ſcutellæ on it. It varies extremely in it's manner of growth, according to the expoſure, and quantity of nouriſhment ſupplied it; and hence has been deſcribed

described half a dozen times over by many of the late botanical writers, under the names of so many species. It has been mentioned under the name of Muscus arboreus floridus, by most of the late authors. Caspar Bauhine calls it Muscus arboreus, cum orbiculis; John Bauhine, Muscus peltatus; Morison, Muscofungus arborum capillaceus. Micheli has evidently described it three times, under the names of three different species, in his N°. 12, N°. 39, &c.

4. *Usnea compressa.*
Flat-branched Usnea.

The Usnea of the Arabians.

This is a moderately large and long species. It grows to the trunks and branches of trees by a flat base, of the breadth of a silver penny, or thereabout; from this base there arises usually only one stalk, but sometimes more. The main stalk continues entire for about an inch from the base, after which it begins to divaricate into several branches; these all break again into others, so that, from one main stalk, the branches at the extremity are often forty or fifty. The whole plant is of a whitish colour. It grows to five or six inches in length, and it's main stalk, as well as the several ramifications, are not round, but somewhat flatted. The surface is perfectly smooth, and somewhat glossy. The main stalk is seldom thicker than a packthread, and the ramifications terminate in fine and pointed capillaments. The branches do not run strait, as in many of the Usneæ, but are frequently very crooked, and, at the extremities, have been supposed to have somewhat of a horned figure. It is not a native of England, nor, so far as is known, of Europe; it is very common in the East Indies, where it has a very fragrant and perfumed smell; but this is generally lost, before the plant can be brought over to us. It grows on trees, and sometimes on old wood that has been wrought. The Indians call it Sabgia. Camelli has described it to Ray under the name of Muscus arboreus candidus et odorifer, in which name it stands in his History. Bellonius calls it Bryon, and tells us it is sold at Constantinople, where it is called Usneck, and laughs at those who suppose our Usnea the Usnea of the Arabians.

The other species of the Usnea described by authors are, 1. Micheli's dichotomous kind, with fine points. 2. The dichotomous Usnea, with thicker points. 3. The finer and longer Usnea, with the weak bark: the cortical part of this is apt to crack annularly, and the segments of it then resemble the beads strung on a necklace. 4. The flat-branched Usnea. 5. The bearded, finer Usnea. 6. The black, jubated Usnea. 7. The hard, woolly, black Usnea. 8. The black, tufted Usnea. 9. The horse-hair Usnea. 10. The small, grey, branched Usnea. 11. The orange-coloured, forked Usnea. 12. The yellow, rigid Usnea. 13. The white, smooth, sweet Usnea. The three new species are, 1. A yellow, short, soft, and extremely-branched one. 2. A yellowish, very long, rigid, and stringy one: both these are found in Charlton-forest; and, 3. A brown, divaricated, and very bushy one, found near Mount Sorrel in Leicestershire.

The Usneæ have the fortune to be more in credit, as medicines, than the Mosses of any other genus; there are no less than three species celebrated by medical writers for their virtues. The Usnea villosa implicata, first described, has been greatly celebrated as an astringent, and prescribed in diarrhœas, dysenteries, and hæmorrhages. Sachsius recommends it's powder extremely as a styptic, and Linnæus tells us, that the Laplanders use it to their feet, when they are sore with much walking. Many other virtues have also been attributed to it, but this has been through the error of supposing it the same with the Usnea of the Arabians, or the species last described here.

Mr Ray recommends the Usnea ramosa crassior, boiled in ale, against defluxions of all kinds, and tells us, that it was also used in powder for the chin-cough, and all other inveterate coughs. The Usnea compressa is the true Usnea of the Arabians, and has long retained it's place in the catalogues of the materia medica; but the first species, or, in defect of that, any tree Moss, that came most readily to hand, was used in it's place. Camelli assures us, that the genuine Moss is, when fresh, of a very fragrant smell. It is used as a perfume at this time by the Turks, and stands recommended as a cordial by the Arabian writers.

MOSSES.

Claſs the Third. Genus the Second.

PLATYSMA.

PLATYSMA is a genus of Moſſes, conſiſting of a firm, tough, and flexile matter, formed into ramifications, which are flat and thin, and, in ſome degree, reſemble, in their diviſions, the ſea fuci.

Theſe Moſſes have the ſame appearance of fructifications with the uſneæ; they have roundiſh ſcutellæ growing on the edges, or ſurfaces, of their leaves, in many parts, which evidently ſerve to the propagation of the ſpecies, though the exact manner in which that is performed is not yet diſcovered.

The later botanical writers have made all theſe plants ſpecies of that enormous genus lichenoides, or, according to Linnæus, lichen, which takes in a yet greater number; but, though it muſt be allowed that the fructification appears much alike in all theſe, it is raſh to determine that it is really perfectly alike in all, from the little we at preſent know of it; and it is impracticable to eſtabliſh generical characters on the parts of fructification, in plants in which we are ſo little informed what thoſe parts truly are. Micheli led Linnæus into this; but not even the reverence due to two ſuch names as theſe ought to plead againſt innovation, in a caſe where the diſtinction of ſo many hundred plants as are included under this term lichen is impracticable without it.

1. *Platyſma reticulatum marginibus ſcutelliferis.*
The reticulated Platyſma, with the ſcutellæ on the edges. **Oak Lungs.**

This is the largeſt of all the plants of this genus. It grows to the trees on which it is found by a firm, and ſomewhat thick, woody baſe; from this there ariſe ſometimes one, ſometimes more diſtinct plants. Each plant is, near the baſe, a broad and flat ſubſtance, of a rough ſurface, and full of veins and riſings. It expands in breadth for half an inch, an inch, or more, and then begins to divaricate, or ſeparate itſelf into ſegments. The whole plant is frequently eight or ten inches long, and ſix or more in diameter. The ſeveral ſegments, where they are ſeparate, are uſually about half an inch broad, but they frequently coaleſce, and form a continued ſubſtance, of an inch or two in breadth; and, what is more ſingular, thoſe ramifications, which go off firſt from the main plant, often unite themſelves to it again at their ends; a thing not uncommon in the vegetation of the ſubmarine plants, but which we do not meet with in any other, except this and ſome other of the Moſſes of this claſs. The ſeveral divarications are variouſly divided into ſegments, and uſually terminate in a forked end. The whole plant is of the thickneſs of a ſtrong parchment, and is almoſt as tough as leather. It's colour is a pale browniſh yellow. The ſurface of the whole is extremely irregular. There are prominent veins running all over it in an irregularly reticulated form; between theſe there are a multitude of depreſſions, which form as many protuberances on the under ſide. Theſe prominent parts are paler than the reſt of the under ſide, which is ſometimes only a little darker than the upper, and ſometimes blackiſh, and is ſomewhat downy, and ſends out, at certain diſtances, a number of cirri, by which it fixes itſelf down to the tree, or to the Moſſes on it's ſurface. On the edges of the ſegments, and in the ſeveral parts near them, grow a great number of ſcutellæ; they are not very large, but very hard, ſolid, of a reddiſh brown on the upper ſide, and paler underneath. On the edges of the ſegments alſo, and in ſome places along the prominent ribs of the plant, near the extremities, there appear rows of little protuberances, of a grey colour, and formed of congeries of a duſty matter. It is highly probable that theſe have ſome ſhare in the fructification, but what that is, or whether they belong to the male or female parts, is not eaſy to be determined: Micheli makes them the female parts, but, we are afraid, without ſufficient foundation. Læſelius and Ruppius have deſcribed the farinaceous and peltiferous plants of this ſpecies as two different ſpecies. Nor is this, indeed, the only inſtance of more than one plant being made out of this. It varies extremely in it's manner of growth: it's young leaves are ſmall, and particularly divaricated, ſo as to ſeem different plants.

Micheli

Micheli has figured theſe, and Bobart mentions a variety of it, with ſegments three times as broad as they uſually are; the ſegments are ſometimes alſo found narrower, and undulated at the edges, in which caſe the whole ſurface of the leaf is generally ſmoother, and, ſometimes, it grows very ſhort, and divaricated into a great number of diviſions at the extremities.

It is a native of England, but is more common in other parts of Europe, where there are thicker foreſts. I have met with it, however, very fine in Charlton-foreſt in Suſſex. It grows to the oak, beach, and other trees. It's ſcutellæ appear in winter.

The botanical writers, in general, have mentioned this ſpecies; it is known in the ſhops, under the name of Pulmonaria; and the common people with us call it, Tree longwort. Pulmonaria, and Muſcus pulmonarius, are the names alſo that it ſtands under in moſt of the authors. Aldrovand calls it, Lichen arboreus; and Dillenius makes it a Lichenoides. All the authors who have figured it, however, except Micheli, have omitted the ſcutellæ, which is wonderful, for they are frequent enough on it.

2. *Platyſma molle anguſtius.*
The ſoft and narrow Platyſma.

This is one of the moſt common Moſſes we meet with; not only trees of all kinds are frequently, in a manner, covered with it; but old boards, ſuch as pales, gates, and the like, afford it in the ſame abundance.

Sometimes one, ſometimes more plants, ariſe from the ſame root: It is ſingle at the baſe, and ofthe ſixth of an inch, or thereabout, in breadth; but it ſoon divides into a multitude of ramifications, which ſubdivide again into others, and finally terminate in forked extremities. It grows to an inch and half, or two inches, in length, and it's tufts often are nearly as much in diameter. It's ſurface is tolerably ſmooth; it's colour a pale grey, or bright aſh colour; and it is remarkably ſoft to the touch. It is tough and thin, and is of an inſipid taſte, but with ſomething of aſtringency in it: it is often full of hollows on the upper ſurface, and always ſomewhat downy beneath. It's divarications have been thought by ſome to reſemble thoſe of a ſtag's horns; they are often dichotomous, as in many of the ſea fucus's; ſometimes trichotomous, ſometimes perfectly irregular. When this plant produces it's ſcutellæ, it's ſegments are uſually narrower; the ſcutellæ grow at the extremities and along the edges. The other plants have, at their edges alſo, and on the prominent veins that ſurround the little cavities on the ſurface, a kind of farinaceous globules, which evidently alſo ſerve for the office of fructification. Whether theſe are the male or female parts, is not known; but they ſeem in this ſpecies to grow on diſtinct plants from the male, though in the former on the ſame.

This common ſpecies of Platyſma differs ſo greatly from itſelf, under it's various circumſtances of growth and fructification, that we could point out no leſs than thirteen ſeveral varieties of it, which are deſcribed by authors, as diſtinct ſpecies of Lichenoides. While young, it's ſegments are few, and are criſtated; afterwards it varies ſeveral times, before it arrives at it's full growth: when young, it has few depreſſions; when full grown, it is uſually full of them. The ſegments are ſometimes very broad, ſometimes very narrow, often fimbriated at the edges or extremities: ſometimes the ramifications are few, ſometimes they are extreamly numerous.

Almoſt all the botanical writers have deſcribed this under the names of Lichen arborum, and Lichenoides arborum. Imperatus calls it, Foglio diramato. Others, Ceratites muſcus arboreus, and Bronchialis. It is ſingular that Micheli never ſaw more than one plant of this with the ſcutellæ, though common enough in Italy. With us the ſcutellæ are very frequent on it.

3. *Platyſma ſinuoſum ſcutellis ovato-rotundis.*
Sinuous Platyſma, with flat, rounded ſcutellæ.

This is the ſpecies commonly called grey, ground liverwort, and famous for the cure of the bite of a mad dog. It is a large and ſpreading plant for one of this genus. It grows ſometimes ſingle, ſometimes ſeveral leaves riſe from the ſame baſe. They are three or four inches long, and are two inches, or more, in breadth, when diſtinct; but they often grow together in ſuch a manner, as to make a ſurface of four or five inches broad. The leaf, in it's true ſhape, is ſomewhat ſmall at the baſe, and gradu-

ally grows broader, as it extends itſelf in length, and is longitudinally divided frequently into a number of ſegments, which are very broad, and ſinuated at the edges, and terminated by obtuſe lobes, whoſe extremities bend inward. This is the uſual appearance of the plant, but, when it produces the patellæ or ſcutellæ, theſe terminating lobes grow narrower and longer, and at their extremities produce the ſcutellæ, which are reddiſh in colour, very hard and firm, and of a roundiſh or oblong form, and ſomewhat convex on the upper ſide; on the lower ſide they are all hollow, and of the ſame colour with the leaves themſelves, which is a paler or deeper aſh colour.

The leaves are thin, and of a membranaceous ſubſtance; tough, and of a whitiſh colour, and downy underneath, with very prominent and downy, or hairy, ribs on them, which ſend off many branches on every ſide, from whence deſcend the little fibrillæ, which are the root of the plant, and ſerve at once to fix it to the earth, and to take in it's nouriſhment. Theſe ribs, on the lower ſide of the leaves, have little long furrows anſwering to them on the upper part.

The plant is frequent with us in barren ground, by ditch-ſides, and on heaths; ſometimes on the ground, and ſometimes about the ſtumps of old trees. Moſt of the writers on theſe ſubjects have deſcribed it. They have called it, Lichen terreſtris cinereus; this is the name given it by Mr Ray, and which it yet retains in the ſhops; Muſcus pulmonarius terreſtris, Muſcofungus hepaticæ facie, and by many other ſuch names. Dillenius makes it one of his great genus of Lichenoides: he calls it, Lichenoides digitatum, cinereum, lactucæ foliis ſinuoſis.

4. *Platyſma corniculatum.*
The horned Platyſma.

This is one of the moſt ſingular ſpecies of this whole genus. It uſually grows from a firm and hard baſe, ſometimes ſingly, ſometimes many plants in a cluſter. It riſes from the baſe with a broad and flat membranaceous or coriaceous ſubſtance, as thick as a ſtrong parchment, and of the breadth of a finger, ſometimes more, and often leſs; this almoſt immediately divaricates into a number of ramifications. The whole plant grows often to be ſix or eight inches high, and four or five broad: it is very tough and firm, of a greyiſh colour, and ſomewhat hoary or downy on the ſurface. The broadeſt of the ſegments are narrower than the main part of the baſe, and they terminate in long and narrow extremities, which, as they grow from the ſeveral lower, as well as upper ramifications, give the whole an appearance of ſome horn of the ſtag kind. The extremities are ſometimes bifid, ſometimes trifid, and ſometimes divided into more numerous parts. The ſcutellæ grow on the edges, and in the middle of the leaves; they are ſmall, roundiſh, very hard, and of a grey colour; they ſtand on ſhort pedicles: on other parts of the leaves there are alſo little, round, farinaceous globules.

This ſpecies is not a native of England: we meet with it frequently brought over from the Canaries, among the Orcelle or Canary weed, deſcribed under the next genus, and uſed in dying. It is alſo common in many parts of the Eaſt Indies. It grows on rocks and on trees. There is ſomething, in the growth of all the ſpecies of this genus, that greatly reſembles the fucus's, but this ſpecies has it more than any other of them. The colour of the plant itſelf, and ſome other obvious circumſtances, diſtinguiſh, or ought at leaſt to diſtinguiſh, what genus it belongs to, when ſeen itſelf; but a figure of it might eaſily be miſtaken for one of a fucus. Moſt of the botanical writers have deſcribed it, but they have called it by a great variety of generical names. Imperatus and both the Bauhines make it a Fucus verrucoſus; and many others call it, Fucus verrucoſus tinctorius. John Bauhine alſo calls it, Alga tinctoria, as do many others. Petiver calls it, Lichen madara ſpatanus; and Plukenet, Muſcus arboreus madara ſpatanus. Kempfer has it under the name of Muſcus in petris altiſſimis creſcens.

The other ſpecies of Platyſma are very numerous in nature, and much more ſo in the works of the botanical writers, who, by miſtaking their varieties for diſtinct ſpecies, have extended the number vaſtly beyond it's native bounds. The more ſingular ſpecies, beſide the four we have deſcribed at large, are, 1. The ſmooth, endive-leav'd Platyſma. 2. The Platyſma, reſembling the Fallopian tube. 3. The pale, blue, ſcolloped-leaved Platyſma. 4. The dark-coloured, digitated Platyſma, with lettuce-like leaves. 5. The livid Platyſma, with reverſed ſcutellæ. 6. The eryngo-leaved Platyſma. 7. The ſpungy, buck's horn Platyſma. 8. The grey, clouded, coria-

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ceous Platyſma. 9. The puſtulous Platyſma. 10. The bluiſh Platyſma, with black warts. 11. The hairy Platyſma, with large, perforated, ſcutellæ; and 12. The cheſnut-coloured, horned Platyſma.

Of the four ſpecies of Platyſma we have deſcribed, three are of uſe, and well known in the ſhops; the firſt and third, as medicines; the fourth, in dying.

The firſt or great tree lungwort has been at all times famous in diſeaſes of the breaſt and lungs. It has been given in obſtinate coughs, and in aſthmas, in form of ſyrup or decoction, it is ſaid, with great ſucceſs; and alſo in the fluor albus, and in dyſenteries, in which caſes it is given in powder, half a dram for a doſe. Breynius gives us an account of an obſtinate jaundice, cured only by a decoction of this Moſs. It is alſo eſteemed a vulnerary. It is not much in uſe in the ſhops at preſent; but phyſic, like other things, has it's faſhions: we are not to ſuppoſe it the leſs valuable for ſuch a neglect.

The third kind is the grey, ground liverwort, famous againſt the bite of a mad dog, and of which is made the pulvis antilyſſus, which is only a mixture of half the quantity of pepper with the powder of this plant.

The laſt ſpecies or corniculated Platyſma is uſed by the dyers, along with the orcelle with which it comes over; and they imagine it helps the colour, but it is not uſed any where, that we know of, alone.

MOSSES.

Claſs the Third. Genus the Third.

CLADONIA.

CLADONIA is a genus of Moſſes, conſiſting of a firm, tough, and flexile matter, formed into ſtalks of a roundiſh figure, ſometimes almoſt ſimple, ſometimes more ramified, and, in many of the ſpecies, reſembling ſmall ſhrubs.

The fructification of this genus of Moſſes, ſo far as it is yet obſerved, reſembles in ſome degree that of the uſnea and platyſma, there appearing, at the extremities of the branches, a kind of tubercles, ſomewhat reſembling the ſcutellæ of thoſe plants. Theſe tubercles, however, are uſually more prominent, and of a ſofter texture than the ſcutellæ of thoſe Moſſes. Theſe tubercles are thicker and more fleſhy, in general, in the leſs-branched ſpecies, and thinner in the more-branched ones. Micheli determines theſe tubercles to be the male flowers of theſe plants; and certain duſty or farinaceous globules, found on other parts of them, to be the female, and contain the ſeeds. Dillenius is of a contrary opinion, eſteeming theſe duſty globules the male parts, the others the female; perhaps, hereafter, ſomething may be added to the ſyſtems of this kind; at preſent, the whole is much too uncertain to found generical diſtinctions upon.

Dillenius calls the plants of this genus, together with thoſe of the next, by the generical name Coralloides; a term which Tournefort and others have uſed to denote a genus of branched fungus's, and which, indeed, much better expreſſes thoſe bodies than theſe Moſſes.

1. *Cladonia furcata.*
The forked Cladonia.

This is the leaſt ramified, or moſt ſimple, of all the genuine Cladoniæ: we meet with accounts of plants of this genus, indeed, in ſome authors, under the name of Lichenoides, conſiſting of only one ſingle undivided ſtalk; of this kind is the Lichenoides caule ſimplici of Ray and others, but this is an error; what they thus took for a peculiar ſpecies of muſcus corniculatus, is indeed no other than the firſt ſhoot of one of the tall cup Moſſes, hereafter to be deſcribed, while not yet opened.

This furcated Cladonia many have deſcribed alſo under the name of Muſcus corniculatus. It grows to an inch and half, or two inches, high; it riſes with a ſingle ſtem, of the thickneſs of a ſmall packthread, of a greyiſh colour, and hollow: toward the top it divides into three or four ramifications, ſmaller than the main ſtem, and terminating in ſharp points; theſe, when ſimple and regular in their growth, give

it

it the furcated figure, from which we have named it; but they frequently grow irregularly, and put on ſo many different appearances, that the plant has been divided, according to them, into ten or a dozen different ſpecies. In the ſimpleſt ſtate the top is divided into two, three, or four parts, which ſtand nearly erect: but at other times theſe bend downwards, and have other points growing up from them; ſometimes the main ſtalk itſelf ſends off a number of lateral branches. The whole plant is ſometimes in great part ſmooth and naked, at others there are a ſort of green, foliaceous excreſcences, roundiſh and very ſhort, growing all over it. It very rarely produces any tubercles; but, when it is in it's moſt ramified ſtate, they are moſt frequent upon it; they ſtand at the tops of the ramifications, and are ſmall, roundiſh, and of a brown colour.

This ſpecies is very frequent in dry places, on heaths, and in woods not too ſhady; Hampſtead-heath produces abundance of it. The generality of authors have deſcribed it under the names of Muſcus corniculatus, and Muſcus ceratoides. Tournefort calls it, Coralloides cornua cervi referens; and Linnæus, Lichen caule erecto, dichotomo, ramis ſubulatis. Tabernomontanus has a good figure of it, but no deſcription. C. Bauhine confounds it with the Filix cornuta ſaxatilis, which is wonderful in ſo accurate a writer. Parkinſon gives a bad copy of Tabernomontanus's figure, and a falſe deſcription adapted to it: he ſeems never to have ſeen the plant. Johnſon has made Gerard, on this head, worſe than he was, by putting C. Bauhine's figure of the filix ſaxatilis cornuta, inſtead of Tabernomontanus's figure, which Gerard had copied. Upon the whole, it is ſomething ſingular, that there is ſcarce any plant more common than this, and ſcarce any one about which the botanical writers have blundered more.

2. *Cladonia ramoſiſſima cava.*
Branched, hollow Cladonia.

This is a very beautiful ſpecies. It riſes from the earth with ſometimes a ſingle ſtem, ſometimes two or more together, and often with ſmaller and ſhorter plants about them. The main ſtalk is of the thickneſs of a large packthread, and ſends off a multitude of branches on every ſide, which are again divided and ſubdivided into ſmaller, ſo that the whole form the appearance of an extreamly ramoſe, little ſhrub. The whole plant is generally two or three inches in height, and an inch or more in diameter. The main ſtalk and ramifications are all hollow, and the tips of the extream ones generally bend downwards; the ſeveral branches, in their growth up, frequently grow to one another; and, the ſeveral plants, from the ſame common baſe, often entangling their branches with one another, the whole cluſter generally appears ſtrangely interwoven and confuſed: the ſubdiviſions which terminate the ramifications are very ſhort and fine, and are often four or five in number from each. The tubercles grow on the extremities of theſe fibrils, and are ſmall, roundiſh, and of a brown colour at firſt, but afterwards they grow almoſt black. The whole plant is flexile, but not very tough, a ſmall force breaking it's largeſt branches. It never has any of thoſe foliaceous excreſcences common on the former. Such is the general appearance of this ſpecies, but it varies extreamly in it's manner of growth, and has thence been deſcribed by many authors under the names of various ſpecies. The branches are ſometimes terminated by ſtellar expanſions, ſometimes the main ſtem is wanting, and the whole plant looks reticular.

It grows abundantly all over Europe. The more northern climates abound moſt of all with it, but our heaths afford a very large quantity of it. It is deſcribed by authors under the various names of Muſcus corallinus, Muſcus coralloides, Muſcus tubuloſus ramoſiſſimus, and the like. Dillenius calls it, Coralloides montanum fruticuli ſpecie ubique caudicans. Micheli, Lichen coralloides receptaculis florum rufeſcentibus perexiguis; and Linnæus, Lichen caule erecto, tereti, ramoſiſſimo, alis perforatis filiformibus. Ray, in his Catalogue of the Engliſh Plants, commends Gerard for the juſt deſcription he gives of this Moſs, but, ſomewhat unluckily, for Gerard deſcribes the common coralline under it's name. His editor and emaculator Johnſon did not find this out; but Ray prudently omits his encomium on Gerard, in his ſubſequent works.

3. *Cladonia ramoſiſſima ſolida.* *Solid, branched Cladonia.*

This is an extreamly pretty little plant, conſiderably ſmaller than the former, but not leſs branched. It uſually riſes with a ſingle ſtem, of the thickneſs of a ſmall packthread, but not round, but ſomewhat flatted. This ſcarce continues ſingle the third of an inch; it almoſt immediately divaricates into two or three branches, and each of theſe into as many others, which in the ſame manner divide again and again, till in fine they form an extreamly ramoſe cluſter: all theſe branches, as well as the main ſtem, are flatted, and they are all ſolid, not hollow, as in the former kind. It grows to about an inch in height, rarely more, and is throughout of a brown colour; the larger branches of a paler, and the ſmaller ramifications of a deeper brown. The whole plant uſually forms a ſort of little buſh, at leaſt as much in diameter as in height, and the extremities of the ramifications are terminated by a kind of prickles, the fibrils into which they there divide being all ſolid, and ſharp at the points. Theſe are weaker and more obtuſe at firſt, but, as the plant grows to it's full ſize, they become ſufficiently hard and rigid: they grow not only at the extremities, but along the ſides alſo of the branches. There are never any foliaceous excreſcences on this plant, but it's branches are bare, ſmooth, and, when broken, are found to have a kind of pith within.

It grows on heaths, and in other barren places in England, and elſewhere. Hampſtead-heath affords it, in ſome few places, not very ſparingly, but moſt of our botanical people overlook it there. It is deſcribed by Ray under the name of Muſcus montanus, fuſcus, ramoſiſſimus, ſolidus. Merian calls it, Muſcofungus, coralloides, fuſcus. Dillenius, Lichenoides fructiculi ſpecie, fuſcum, ſpinoſum. Buxbaum calls it, Lichen coralloides, aculeatus, nigricans; and Micheli, Lichen terreſtris, atrofuſcus, minor, veluti aculeatus. He has another which he calls Major, and which is evidently but a variety of this.

4. *Cladonia tophacea.* *The tophaceous Cladonia.* Orcelle, or Canary-weed.

This is a very ſingular ſpecies of Cladonia, known by our dyers under the name of Orcelle and Canary-weed. It has for it's baſe a broad and tuberous lump of a tophaceous or calcarious matter, from which there ariſe two, three, or four, ſometimes more ſtalks; theſe are cylindric, and ſomewhat rigid, but tough, and not eaſily broken; they grow to two, three, or ſometimes four inches high, and are ſometimes ſtrait and erect, ſometimes crooked and variouſly bent; ſome of them are ſimple or undivided, but others are branched into two, four, or more ſegments, which are uſually long and ſlender, but ſometimes very ſhort. The colour of the whole is ſometimes a pale grey, ſometimes a duſky brown, or blackiſh. The ſurface is ſmooth, and the whole plant ſoft to the touch; the branches are all ſolid, and contain within them a tophaceous matter, like that of the baſe; ſome have more, ſome leſs of it, but few of them are without a conſiderable portion of it. The uſual thickneſs of the main ſtalks is that of a moderate packthread; in different parts of the branches there appear frequent little depreſſions, and tubercles of various forms, flatted, more prominent, or abſolutely rounded; they are uſually of a dark brown colour, and are very hard, when broke; they are found to contain a tophaceous matter reſembling chalk, wholly the ſame with that of the baſe. Theſe tophaceous tubercles are originally contained in a ſort of cups, reſembling the ſcutellæ of the common platyſma.

It is not a native of England, but it is extreamly common in many other places on the rocks about the ſea-coaſt. It is frequent about the Archipelago, and in the Canary Iſlands, whence we receive it.

This ſpecies has been known from the earlieſt times we have any account of. It's growing near the ſea made the antients call it a fucus, and it has, indeed, a diviſion in it's ramifications, not unlike that of thoſe plants. Theophraſtus was well acquainted with it; he calls it, πόντιον φύκος, and tells us, that it grew in Crete, on the rocks near the ſea, and that they dyed woollen garments red with it. Dioſcorides gives it the ſame place for it's origin, and calls it, φύκος θαλάσσιον; and Pliny borrows his name,

and Theophraſtus's account of the uſe of it. At preſent our mercantile writers have called it, Oriſella, Oriſelle, and Roccella. Many of the botanical authors have named it, Fucus tinctorius, and Muſcus rupeus infectorius. Tournefort calls it, Lichen Græcus, polypoides, tinctorius; and Boerhaave, Muſcofungus ceranoides, albus, tuberculatus, apicibus nigris. Micheli calls it, Lichen ſaxatilis, Italicus, polypoides, cinereofuſcus, criſpus. Thevet was the firſt perſon who taught us the name of Oriſella for it; and ſome of the writers of that time miſunderſtood him ſo far, as to give this as a ſynonymen of the geniſta tinctoria.

The ſpecies of this genus, beſide theſe three, are conſiderably numerous in nature, and appear much more ſo in authors. The more ſingular among the hollow kinds are, 1. The great, ſoft, open Cladonia. 2. The curled Cladonia. 3. The prickly, diſtorted Cladonia. Among the ſolid ones, 1. The black, reticulated Cladonia. 2. The tuberculoſe Cladonia. 3. The coralline-like Cladonia. 4. The cypreſs-like Cladonia. 5. The fucus-like Cladonia. 6. The pod-like Cladonia. 7. The ſhort-pointed, perforated Cladonia.

The Cladoniæ are not without their uſe in medicine, and in the arts and manufactures. The firſt ſpecies deſcribed here, called the Horned Moſs, has been long famous in form of a ſyrup or decoction againſt coughs, and other diſeaſes of the breaſt. The ſecond kind has the name Rain-deer Moſs, from it's ſerving as food for the rain-deer of Lapland, and other cold countries, when no other is to be had. The laſt ſpecies or orſelle is well known for it's uſe in dying. The Dutch had at one time the ſecret of manufacturing it to themſelves; but at preſent it is done in London, by a ſet of people called Argol or Orchel-makers. It gives a red in various degrees, and ſhades, but it does not ſtand well. Urine and pot-aſh ſeem to be the ingredients uſed to extract it's colour.

It is ſingular that this Cladonia has it's fructifications, not at the extremities, as all the reſt of this genus have, but on the body of the branches, as the ſpecies of platyſma; though, in all reſpects beſide, it agrees with the Cladonia, and indeed very much reſembles the leſs-branched kind firſt deſcribed.

I remember to have obſerved ſeveral ſpecies of the Cladonia on Rook's-hill near Goodwood, full of a tophaceous matter, ſuch as fills up this orſella. It would be well to try whether ſuch a colour might not be drawn from them.

MOSSES.

Claſs the Third. Genus the Fourth.

PYXIDIUM.

PYXIDIUM is a genus of Moſſes, conſiſting of a firm, tough, and flexile matter, formed into the ſhape of hollowed cups or drinking-glaſſes, with longer or ſhorter ſtems. The parts of fructification in this Moſs greatly reſemble thoſe of the Cladonia. They are large, ſoft tubercles, of a convex form, and of a browniſh, blackiſh, or red colour, affixed to the edge of the cup, ſometimes on pedicles, ſometimes without. The tubercles in the Pyxidia are larger and ſofter in general than in the Cladonia. In ſome of the ſpecies of the Pyxidia, the cups are very fair and perfect, in others they are leſs; in ſome ſcarce diſtinguiſhable.

Linnæus and Micheli make theſe all ſpecies of the vaſt genus of lichen, and Dillenius makes them of his genus of coralloides; though, if he had conſidered his intent of bringing them into it, 'tis probable he would have given ſome other generical name to the whole.

1. *Pyxidium margine leviter ſerrato.*

Common Cup-moſs.

This is a ſpecies of Pyxidium, in it itſelf almoſt too common for deſcription; but it's varieties are extreamly worthy to be noted, as they have led authors into the error of deſcribing this ſpecies under different names, as eight or nine different plants.

The firſt appearance of this Moſs is in a granulated cruſt, extending itſelf an inch or two, ſometimes much more, over the ground; this, by degrees, expands itſelf ſo as to form a ſort of leaves of a perfectly irregular and indeterminate figure. They are finuated at the

the edges, of a greeniſh colour on the upper ſide, and whitiſh underneath; at the baſes of theſe leaves ariſe the cups; they conſiſt of a pedicle ſmalleſt at the bottom, and larger higher up, terminated by a hollow cup, reſembling a drinking-glaſs; the general height of the whole plant is three quarters of an inch, and the colour a greeniſh grey: the edge of the cup is very lightly ſerrated. Such is the common appearance; but it ſometimes has the whole cavity of the cup covered with greyiſh globules, and after theſe has tubercles of various ſize and form, growing at it's edges. Sometimes the cups expand to the breadth of a ſhilling, and ſometimes they will ſcarce admit the head of a pin in the full grown plants, of the ſame ſpecies; in ſome the tubercles ſtand cloſe on the edges of the cup, in others they are raiſed on pedicles, and in others new cups on their proper pedicles grow from the old one, and theſe only bear them; in this caſe the Cup-moſs is called proliferous, and is deſcribed as a peculiar ſpecies by many. Theſe ſecondary cups ſometimes grow from the ſides, ſometimes from the center of the old cup, and they often bear others upon them, ſo that it is common enough to ſee three, ſometimes four, ſeries of them one over another.

From this and many other parallel circumſtances, there appears reaſon to believe, that theſe tubercles are neither male nor female parts of fructification, but a kind of ſoboles, like thoſe of the dentaria ſobolifera, and ſome other plants, which are ready to vegetate into new plants wherever they fall, and which falling into the cavity of the cup that produced them, or remaining only too long on it's ſides, take root there, and grow, as they would have done on the earth; and perhaps this is not ſingular to the Cup-moſſes, but it may obtain in all of this claſs.

Theſe are the various forms under which this Pyxidium appears, and under theſe it has been called Muſcus Pyxidatus major, minor, prolifer, and tuberculoſus. Linnæus himſelf has not eſcaped this common error of miſtaking the varieties of this plant for ſpecies, but deſcribes it, in it's common ſtate, in one place, under the name of Lichen caule ſimplici, calyce turbinato, margine tenui; and in another, in it's central proliferous ſtate, under that of Lichen caule ſimplici, calyce turbinato, centro ſimpliciter prolifero.

This Moſs, in it's common ſtate, is found on every barren place almoſt in the kingdom; in it's various proliferous ſtates, we meet with it on Hampſtead-heath, and in the woods about Harrow.

2. *Pyxidium gracile margine laciniato.*
The ſlender Pyxidium, with jagged edges.

The firſt appearance of this Moſs is in form of a ſcabrous cruſt, which gradually unfolds itſelf into leaves of a greeniſh colour on the upper ſide, and grey underneath; from the baſes of theſe leaves ariſe cups of three quarters of an inch high. The pedicles of theſe are ſlender, the cups themſelves moderately wide and deep, and their edges ſomewhat deeply jagged; they are of a duſky, greyiſh-brown colour, with ſome admixture of green in it; and have ſometimes little foliaceous excreſcences about them, like thoſe at the baſe: this ſpecies generally grows in conſiderable cluſters together. It is very rarely met with, with the tubercles upon it: they are ſmall, prominent, and brown, and ſtand on the ſides of the ſerratures.

This is alſo more rarely proliferous than the common kind, but it is ſometimes met with proliferous to a ſecond or third degree from the center, very rarely from the ſides.

Many of the botanical writers have confounded this with the common Cup-moſs; and others of them, not content with ſeparating it from that, have made two or three ſpecies from it's varieties in the different ſtates. Moriſon deſcribes it, in it's ſimple ſtate, under the name of Muſcofungus Pyxidatus ſaxatilis; and Micheli deſcribes it twice in two of it's ſtates, once under the name of Lichen Pyxidatus minor; and a ſecond time under that of Lichen, non ramoſus, acetabulis fimbriatis. Vaillant has given a very good figure of it, but the ſerrature of the edges ought to have been expreſſed deeper. Micheli's firſt figure does not repreſent the plant well; his other is better, but the laciniæ are too thick. Linnæus met with it in Lapland, in it's uncommon ſtate of proliferation from the edge; he has deſcribed it under the namen of Lichen caule ſimplici, calyce turbinato, margine acuto prolifero.

It is common enough in England, in it's ſimple ſtate; and I remember to have ſeen it proliferous to the third degree from the center, on the thatch of a houſe, in the way to Burntwood in Eſſex.

3. *Pyxidium*

3. *Pyxidium elatius pyxide minima.*
The tall Pyxidium, with very ſmall cups.

This makes it's firſt appearance in form of a coarſe, ſcabrous cruſt, expanded over the earth for three or four inches ſometimes, and of a greyiſh colour. This afterwards expands into a foliaceous matter, of a greeniſh colour on the outſide, and grey underneath. In the midſt of this there riſe up ten, twenty, or more ſtalks, from the ſame cruſt; theſe grow to the height of two inches, and are of the thickneſs of a ſmall packthread. They are ſometimes ſtrait, ſometimes crooked, and, though uſually ſingle all the way up, they ſometimes divide, toward the top, into two, three, or more branches. They are hollow, of a greyiſh colour, and are ſometimes ſmooth, ſometimes covered with a duſty, excrementitious matter, and ſometimes they have little excreſcences, like leaves, growing on their ſurface, in the manner of thoſe from the cruſt. People, who have met with it in this ſtate, have deſcribed it under the name of a Muſcus corniculatus, never ſuppoſing that it would, when perfect, be of the cup-kind. When full grown, the tops of the plant, or of it's ramifications, if it have any, open into a very ſmall and ſhallow kind of cup, round the edges of which there ſtand the fructifications, in form of ſmall, brown tubercles. Theſe, as in the other Pyxidia, ſometimes ſtand cloſe on the edge of the cup, ſometimes they are elevated on little pedicles, and, in ſome places, it is met with proliferous, in which ſtate it makes a very ſingular figure.

The variety of forms under which this Moſs appears, not only when it's cups are opened, but before, is ſurpriſing. It is accordingly deſcribed by authors under the names of various ſpecies of lichenoides; and theſe errors have helped not a little to ſwell that genus into ſo vaſt an extent.

It is extremely common on our heaths, and in other barren places. Merret has deſcribed it under the name of Lichen tubulatus; Doody calls it Muſcus licheniformis cornu ſimplici, under which name it ſtands in the Synopſis of Britiſh Plants. Tournefort calls it Lichen tubulatus cinereus, and Linnæus, who met with it in Lapland, calls it Lichen caule ſimplici, tubulato, rarius bifido. Micheli deſcribes it, three times, under as many names, in three of it's different ſtates.

The other ſpecies of this genus, really diſtinct from theſe, and from one another, are conſiderably numerous: of the Pyxidia with perfect cups, the principal ſpecies are, 1. The Pyxidium with ſcarlet tubercles. 2. The ſhort-footed Pyxidium. 3. The elk's-horn Pyxidium. 4. The tall-branched and jagged Pyxidium. Among thoſe with leſs conſpicuous cups the principal are, 1. The thigh-bone Pyxidium. 2. The corniculate Pyxidium. 3. The ramoſe Pyxidium. 4. The ſcarlet-headed, branched Pyxidium. 5. The brown-headed, ſimple, tall Pyxidium. The names of theſe, after the deſcription at large of the others, will be ſufficient to diſtinguiſh them.

All the Cup Moſſes have been famous, throughout ſeveral ages, for the cure of coughs of the moſt inveterate kinds, and particularly for what is called in children the chin-cough: the common one is the ſpecies moſt recommended. It has not been of late received into the ſhops, or preſcribed by phyſicians; but it is of the number of thoſe things which an eſtabliſhed reputation for ages, and a multitude of accounts of cures performed by them, ought to recommend to a trial in the ſhops.

M O S S E S.

Claſs the Fourth.

Such as conſiſt merely of a dry, cruſtaceous, or elſe of a gelatinous matter.

Genus the Firſt.

PLACODIUM.

PLACODIUM is a genus of Moſſes, conſiſting of a friable, or of a gelatinous matter, formed into cruſts, or flat cakes, ſometimes merely ſcabrous, and granular, but, at others, ſomewhat foliaceous about the edges.

The

The fructification in this genus appears in form of bracteæ, or ſpangles, on the ſurface of the plant, and principally about the center; theſe are very various in their figure, ſometimes prominent, like the tubercles of the pyxidia, ſometimes flat, and ſometimes hollowed, like the ſcutellæ of the ſpecies of platyſma. Theſe different figures appear not only on the different ſpecies, but in the fructifications of the ſame plant, in their different degrees of maturity. The foliaceous terminations of the matter of theſe Moſſes are more perfect in ſome, and leſs ſo in others and in ſome they are cloſely affixed down to the ſubſtance they grow upon. In others they are more looſe and free; in ſome they are regularly divided into ſegments, and only fixed down by cirri. Dillenius has ranked theſe among his lichenoides, and Micheli and Linnæus, in their yet larger genus of lichen; and it is to be obſerved, that ſome of the lycogalæ of Micheli evidently belong alſo to this genus, and alſo that ſome plants which Dillenius has arranged among theſe are pyxidia, or cup Moſſes; what he calls cruſtaceous in them being no more than the foliaceous baſe common to all the plants of that genus.

1. *Placodium bracteis majuſculis limbo albo cinctis.*
The Placodium with large bracteæ, edged with white.

This is of the number of the leſs beautiful Placodiæ. It has nothing foliaceous about it, but is a mere ſcabrous, irregular cruſt, of a dry, friable, granuloſe matter, and of a grey colour. This cruſt riſes in prominences in ſome places, and has depreſſions and cracks in others, with irregularly undulated lines in the ſeveral parts. It is uſually covered with a ſomewhat coarſe grey powder, eaſily rubbed off with the fingers; and, about it's center, it produces large bracteæ, twenty or more upon a plant. Theſe are at firſt cloſed at the top, but they in time open into a kind of cups. They have no pedicles, and are but little hollowed; their cavity is brown, but their limb or edge all round is white.

The whole plant is thick, but very brittle. It does not form itſelf into regularly figured cruſts, but extends any way to the length of an inch or two, and often as much in diameter. It grows on old walls, on the barks of trees, and on the ground. Micheli deſcribes it under the name of Lichen cruſtaceus, ſaxatilis, farinaceus, verrucoſus, candidus, omnium craſſiſſimus, receptaculis florum nigricantibus. Dillenius calls it Lichenoides tartareum, farinaceum, ſcutellatum umbone fuſco, and tells us that Celſius, who ſent it him from Upſal, told him it would make an excellent red dye. We have it in Leiceſterſhire and Warwickſhire very abundantly; and not only this, but many other of the Moſſes both of this and the former genus, contain a matter ſo very like that of the orſella, that they deſerve to be tried for producing the ſame colour, moſt of them being plentiful enough at home.

2. *Placodium areolatum bracteis flavis.*
Areolated Placodium, with yellow bracteæ.

This is a much handſomer ſpecies than the former. It always grows in a circular, or nearly circular form, and is cloſely fixed down to the ſubſtance it grows on all the way through, but ſomewhat leſs ſo at the edges than in the middle. It conſiſts of a very thin and fine cruſtaceous matter, of a ſtrong yellow colour, very friable, and appearing only granular toward the center, but formed into ſomewhat of a foliaceous appearance at the edges, and undulated and ſinuous, though without diſtinction into leaves, lobes, or ſegments. The male and female parts of fructification ſeem to be on different plants; ſome of thoſe, evidently of the ſame ſpecies, being leſs regularly formed, leſs round in their growth, and leſs foliated at the edges, and having a duſty, farinaceous matter in little granules; and others producing bracteæ. Theſe are, at firſt, yellow in the center, but white at the edges, and a little hollow; but, as they grow larger, the white limb vaniſhes, and they grow plain and yellow, and ſometimes they become prominent in the middle; the bracteæ and the farinaceous matter are ſometimes both ſeen on the ſame plant in this ſpecies, but that is leſs common.

It is frequent with us on walls and ſtones, and ſometimes on old trees. Micheli deſcribes it under the name of Lichen cruſtaceus ſaxatilis, cruſta tenuiore lutea, receptaculis florum ſaturate aureis. Buxbaum calls it Lichen ſaxatilis, leproſus, croceus.

Bayerische Staatsbibliothek München

3. *Placodium lobatum hiſpidum.*
Hairy, lobated Placodium.

This ſpecies has ſomewhat of the appearance of the platyſma, but it's diviſions are all fixed down at the edges by cirri, and it's bracteæ are of the form of thoſe of this genus. It grows to two or three inches in length, and as much in breadth, but rarely extends itſelf in a regularly circular form. It conſiſts of a kind of leaves, divided into a number of narrow and oblong lobes, obtuſe at their ends, of a pale bluiſh colour, and furniſhed all round with long cirri, by means of which they are affixed down to whatever they grow upon. The ramifications are, in general, ſomewhat convex on their upper ſide, and hollow underneath; and, thoſe of ſeveral plants, which ſtand near one another, intangling together, there is often met with a cruſt of this Moſs, extending to a vaſt breadth. The cirri are ſometimes black, ſometimes grey, and, though they fix down the diviſions of the leaves, they do not pull them cloſe to the ſubſtance they grow on. The bracteæ are very frequent on this ſpecies; they grow both from the middle and edges of the leaves; they ſtand on moderately long pedicles, and are hollow at firſt, but, afterwards, plain; their middle is black, their edge grey, and this edge, or limb, is ſometimes dentated and prominent, ſometimes plain; and even ſome of theſe plants are found full of little, verrucoſe protuberances; theſe are of the ſame colour with the leaves, and, when cut open, are fungous within. It is frequent on trees and buſhes. The common ſloe-trees about London afford a great deal of it, and old gates and pales are frequently, in a manner, covered with it. Moſt of the botanical writers have mentioned this ſpecies. Columna has it under the very long name of πλανοπυκνοδασυφυλλος; Caſpar Bauhine calls it Muſcus arboreus capitulis cavis; Merret, Muſcus arboreus umbilicatus; Tournefort, Lichen latifolius, ramoſus, minor, hirſutus; and Moriſon, Muſcofungus arboreus, cinereus, ſcutellatus, marginibus piloſis. Columna has deſcribed it very perfectly; the reſt are deficient.

4. *Placodium durius candidum.*
White, hard Placodium.

This is the hardeſt of all the Placodiæ, but it crumbles to powder, like the reſt, if rubbed forcibly between the fingers. It grows in an irregular form, extending to an inch or more in length, and as much in diameter: it is moderately thick, and merely granular, having nothing foliaceous about it's edges. It is uſually cracked in ſeveral places, and is often covered almoſt intirely with a grey, farinaceous matter. Among this appear the bracteæ, which are ſmall, convex, and of a black colour. It grows on rocks in Wales and Scotland, and is called, by the country people, Cork, Corker, and Kenkerig. The Scotch, and ſome others, have a way of dying ſcarlet with it. they prepare the dye by ſteeping it in urine, much as our orſelle-makers do that from the orſella, or canary-weed. It is highly probable that many other of theſe cruſtaceous and tophaceous plants would do the ſame.

The ſpecies of Placodium, beſide theſe, are, in nature, a great many, in authors more: Micheli has not given much leſs than a hundred, and Dillenius yet more. A great many of the figures of both theſe authors, however, give us only the different appearances of the ſame plant, under the names of different ſpecies. The more ſingular ones, beſide theſe, are, 1. The lineated, cruſted Placodium, in which ſomewhat like characters are ſeen. 2. The pale, cruſty Placodium, with brown bracteæ. 3. The yellow, lineated Placodium. 4. The Placodium with red tubercles. 5. The large, bracteated Placodium, or crab's-eye Placodium. 6. The black, ſpangled, leprous Placodium. 7. The areolated, grey Placodium. 8. The lobated, gelatinous Sea-Placodium. 9. The curled, gelatinous Sea-Placodium. 10. The opuntioide, gelatinous Placodium. 11. The tranſparent, endive-leaved Placodium. 12. The common, blue, curled Placodium. 13. The common, yellow, curled Placodium. 14. The greyiſh-brown, tree Placodium, black underneath. 15. The blunt-horned Placodium. 16. The grey, flat, black-haired Placodium.

MOSSES.

Claſs the Fifth.

Such as produce capſules covered with opercula.

Genus the Firſt.

BRYUM.

BRYUM is a genus of Moſſes, conſiſting of a ſtalk furniſhed with leaves, or of a cluſter of leaves, riſing immediately from the root; and producing a ſeparate pedicle, with a capſule on it's ſummit, covered with a ſmooth operculum, or calyptra, of a conic figure, and containing a fine powder: the pedicle ariſing either from the center of the radical leaves, or from the ſummit of the plant, or of it's branches, or, finally, from what was the ſummit of the plant or branches of the laſt year, and being ſomewhat tuberoſe at the baſe, and not ſurrounded with any particular involucrum.

The ſmoothneſs of the calyptra diſtinguiſhes the Bryum from the polytrichum, and the want of a peculiar involucrum at the bottom of the pedicles, as alſo their growing from the ſummits only of the branches, diſtinguiſh it from the hypnum. Linnæus, attempting to range the Brya according to their fructifications, makes the cylindric figure of the capſule a part of the character; but this is erroneous, for many of the ſpecies have it quite round, or globular; ſome oval, ſome flatted, and ſome falcated. This author, according to the doctrine of Micheli, alſo ſuppoſes theſe capſules to be the antheræ, or receptacles of a farina fœcundans, and, conſequently, to be the male part of the fructification: but it is wonderful that he was not convinced of the miſtake of Micheli in this, by obſerving, that, in neither this genus, that of the hypna, or any other that produces this kind of capſule, except in the polytrichum only, he could ever find any thing that it was poſſible to take for a female flower.

To us the matter contained in theſe capſules appears to be the true and perfect ſeeds of theſe little plants, and the farina, or male impregnating matter, to be lodged in antheræ, arranged on the pyramidal bodies, which grow from the top of the capſule, under the calyptra, and which, meeting in a point over it, form what he calls an acuminated operculum.

The ſpecies of Bryum are extremely numerous. Dillenius has figured no leſs than fourſcore of them: we ſhall give deſcriptions at large of four ſpecies, which will expreſs all the variations in the general figure of theſe beautiful little plants; the reſt will eaſily be underſtood by one or other of theſe.

1. *Bryum acaulum calyptra quadrangulari.*

The ſtalkleſs Bryum, with a ſquare calyptra.

This ſpecies is of the number of thoſe which conſiſt only of a cluſter of leaves, ariſing immediately from the root, with the pedicle ſupporting the capſule, growing from the midſt of them. The firſt appearance of this plant, in the beginning of winter, is this: a cluſter of leaves, eight, ten, or more, ſpread themſelves every way from the root, in form of a radiated ſtar; they are broad, and rounded at the baſe, and terminate in a point: they are perfectly ſmooth and gloſſy, and of a very pale green. Soon after the appearance of theſe, a fine white pedicle, like a hair, is ſeen ariſing from the midſt of them, and this, after ſome time, ſhews a ſquare calyptra on it's top, covering the rudiments of the capſule: the capſule, ſome time after, grows to it's full ſize, and the pedicles, which were at firſt white, now become reddiſh, and the leaves, inſtead of remaining expanded in the figure of a radiated ſtar, collect themſelves about the baſe of the pedicle, and form a ſort of bulb there: the calyptra, at firſt of a pale ſtraw colour, now becomes of a yellowiſh green, and the pedicles, which before were erect, bend down, in form of a ſemicircle, or of a larger part of a circle. The calyptra being pulled off, the heads are now found to be of a pear-faſhioned ſhape; they are not ripe, however, till April, at which time they are of a fine gold yellow colour, as are alſo the pedicles. The capſules, when fully ripe, are ſomewhat crooked, and the aperture,

aperture, with it's ring and the pyramidal bodies over it, is not in the middle of the capſule, but on one ſide; when opened, they are found to contain a fine yellow powder. When there is plenty of nouriſhment for this Moſs, it ſometimes riſes into a kind of ſtalk, carrying this bulb, which was once the congeries of ſtar-like leaves at the top; this is common alſo to all the other acaulous Bryæ; ſo that they cannot, with perfect ſtrictneſs, be called by that name, though it very well expreſſes an obvious diſtinction in the common appearance of the plant. This is ſo extremely common a Moſs, that ſcarce any of the botanical writers have omitted a deſcription of it. Vaillant calls it Muſcus foliis ſcutellatis capitulo pyriformi nutante; Tournefort, Muſcus capillaceus, folio rotundiore, capſula oblonga incurva; and Dillenius, Bryum bulbiforme, aureum, calyptra quadrangulari, capſulis pyriformibus nutantibus. The old authors, in general, call it Polytrichum aureum minus, and Polytrichum Apuleii. It grows in great abundance on our heaths, and even by way-ſides; it thrives beſt in places where there is moiſture.

2. *Bryum ſtellare, cauliculatum, capſulis ovatis pendulis.*
The ſtarry, cauliculate Bryum, with oval, pendulous capſules.

This is one of the moſt beautiful of all the genus of Bryums, and appears in the greateſt variety of forms of any of them, inſomuch that, in it's different ſtates, it has been deſcribed under various names, as different ſpecies. It is, in it's moſt general and perfect ſtate, erect and ſimple; but it is, alſo, ſometimes erect, ramoſe, and larger, and ſometimes procumbent, and ſo wholly unlike every thing that it has in it's common appearance, that nothing, but the having obſerved it's changes, could have diſcovered that theſe it's ſeveral ſtates and appearances were all but the variations of nature in the vegetation of a ſingle plant. In it's perfect ſtate it conſiſts of a fibrous root, a ſingle ſtalk of about three quarters of an inch high, a pedicle of about the ſame length, and an oval capſule, bending downwards, and covered with a conic calyptra.

The ſtalk is furniſhed all the way up with ſmall, ſhort, and obtuſe leaves, approaching, in their figure, toward roundneſs; at it's ſummit there grow a cluſter of leaves, of a different ſhape, oblong and pointed, and much larger than the others. Theſe are diſpoſed in form of a radiated ſtar, and, from the center of theſe, ariſes the pedicle; which is yellow, it's tuberous baſe reddiſh, and the capſule large, and full of a greeniſh-yellow powder.

Sometimes, inſtead of a pedicle to ſuſtain a capſule, there ariſe, from the ſtarry top of the ſtalk, three or four branches, thick ſet with long and narrow leaves, very unlike thoſe of the lower part; and ſometimes theſe branches ſhoot out from the alæ of the leaves of the main ſtalk, not from it's ſummit; in either caſe the plant grows to two, three, or four inches in height, and has an appearance wholly unlike itſelf in it's former more natural ſtate: but it's moſt ſingular appearance of all is, when it trails upon the ground, as it will ſometimes do, to the length of three or four inches. In this ſtate it ſomewhat reſembles the trichomenes. It's ſtalks are roundiſh, and are furniſhed with ſhort and roundiſh leaves on each ſide, growing ſmaller as they approach the point; and the ſtalk ſometimes divides at that part, and becomes bifid; ſometimes it ſends out other branches, and is all the way faſtened down to the ground by little roots. The leaves, in all theſe ſtates of the plant, are ſmooth and gloſſy, and, if examined by the microſcope, they are found to have their edges finely ſerrated, and to be terminated by a ſort of weak ſpine.

This ſpecies is common in damp places, a little ſhadowy: Hampſtead-heath furniſhes abundance of it, and that in all it's ſtates.

Many authors have taken it, in it's creeping ſtate, for a lichenaſtrum; but Hoffman very judiciouſly obſerves, that it may always be diſtinguiſhed not to be of that genus of plants, by the ſerrature of the leaves, and by their ending in a kind of ſpine. Panconius has favoured the error of taking it for a lichenaſtrum, by figuring it as growing in circular cluſters, and with an odd leaf at the end of the rib, or ſtalk; but this is not in nature: it grows irregularly and ſcatteredly, and has no odd leaf, it's extremity being either fixed down by roots, or terminated in a ſcutulated point. Plukenet has figured it in an ill poſture, and from a decayed ſpecimen, the leaves being curled up, which they never are while the plant is growing.

Tournefort has deſcribed it twice; once under the name of Muſcus paluſtris foliis ſubrotundis, and once under that of Muſcus polytrichoides, polycephalus, chamæſyces folio.

Hoffman

Hoffman calls it, Muſcus trichomanis facie foliis utrinque rotundis et ſplendentibus; and Dillenius, in his Catalagous Giſſenſis, deſcribes it three times, as he confeſſes in his Hiſtory; once under the name of Bryum nitidum foliis ſerpylli pellucidis ſubrotundis elatius; a ſecond time under that of Bryum nitidum foliis inferioribus ſerpylli ſuperioribus anguſtis et oblongis; and a third under that of Lichenaſtrum trichomanis facie. If ſo accurate an author as this was deceived by the various appearances of this Moſs, there is no wonder that others ſhould deſcribe them as various ſpecies.

3. *Bryum cauliculatum capſulis ſphæricis.*
The cauliculate Bryum, with round capſules.

This is of the number of thoſe Bryums, whoſe pedicles ariſe from the heads of the ſtalks of the year before; ſo that, other branches having grown from them, in the mean time, theſe, till this circumſtance is underſtood, ſeem to emulate the character of the hypna, and to protrude their pedicles from the midſt of the branches. There is, however, another great character which diſtinguiſhes all theſe Bryums, which is, that the pedicle has no foliaceous involucrum at the baſe, as thoſe of all the hypna have.

This very beautiful Bryum grows to about an inch and half in height, without the pedicle; and, ſeveral of the plants always growing together, they make a very pretty tuft, ſometimes of a foot broad. The young plants are ſimple, but the taller ones are branched; that is, ſecond and third year's ſhoots having grown from them, two or three for each year, they appear to be ſomewhat ramoſe. The leaves ſtand extreamly thick and cloſe about them, and are oblong, very narrow, and of a carinated form, and of a beautiful pale green colour. The pedicles for the capſules appear in February; ſome growing from the ſummits, ſome from the ſides of the branches, according to their ſeveral periods of growth. They are fine as hairs, of a reddiſh colour, and tuberculous at their bottom: the capſules are ripe about May, and ſoon after fall off; they are perfectly round, and have an obtuſe, ſhort calyptra, which generally falls off very ſoon after they have acquired their full ſize.

It is not unfrequent on ditch-banks, and readily diſtinguiſhes itſelf there by it's fine, bright, green colour, and the largeneſs of it's tufts. It grows plentifully on Hampſtead-heath, and about Harrow. Ray has deſcribed it under the name of Muſcus trichoides, medius, capitulis ſphæricis; and Moriſon, under that of Muſcus trichoides, minimus, ſericeus, capillaceus, capitulis ſphæricis. Linnæus under that of Bryum caule recto foliis ſetaceis capitulis globoſis.

The capſules are made too large in Moriſon's figure, and in Vaillant's the leaves are too broad; the operculum is figured too acute in them both; it is in nature obtuſe.

4. *Bryum ramoſum lanuginoſum.*
Branched, hairy Bryum.

This is of the number of the Bryums, that are truly and really branched. It is, indeed, as much ſo, as the generality of the hypna; but the pedicles grow all of them from the extremities only of the branches, not from their ſides, and have no foliaceous involucra at the baſe, which is naked and tuberous, as in the other Brya.

This ſpecies ſometimes is found ſingle, ſometimes in tufts, and thoſe of conſiderable extent, a great quantity of the plants being entangled one with another. It grows to five or ſix inches in length, and it's ſtalks are ſomewhat rigid, yet they do not ſupport themſelves erect, but trail upon the ground, and take root at ſeveral places. They are ſometimes ſingle, ſometimes divaricated, and always ſend off on each ſide a number of branches, which are ſometimes ſimple, ſometimes themſelves furniſhed with others; theſe branches are cloſer ſet with leaves than the main ſtalks, and conſequently they appear thicker. The leaves are very narrow, of a whitiſh, green colour, and all terminate in long, white hairs at their points; they ſtand very cloſe together, and quite hide the ſtalks. From the ſummits of theſe branches there proceed pedicles very fine, like hairs, and of a pale yellow colour; they are ſhort, and bear ſhort heads of a ſomewhat roundiſh figure, but pointed at the ſummit, and covered with a conic and ſharp-pointed calyptra.

It is frequent on the Alps and Pyrenæan mountains, nor is wanting, in that great reſource of the Moſſes, England: we have it on Mendip-hills abundantly, and in ſome other places. The more ſingular ſpecies, beſide theſe, are, 1. The ſlender, ſtar-top'd Bryum, with round heads. 2. The cruet-ſhaped Bryum of Dillenius. 3. The ſickle-leaved, bending Bryum. 4. The green, cluſtery, Alpine Bryum. 5. The long-ſhanked, curled Bryum. 6. The dwarf, long-ſhanked Bryum, with hairy leaves. 7. The branched Bryum, with pendulous heads. 8. The ſhrubby Bryum, with long, tranſparent leaves. 9. The round, tranſparent-leaved Bryum, with pendulous heads. 10. The ſmall, brittle, whitiſh Bryum. 11. The Norway Bryum, with a ſcarlet umbrella-head. 12. The membranaceous, blunt-leaved Bryum.

MOSSES.

Claſs the Fifth. Genus the Second.

POLYTRICHUM.

POLYTRICHUM is a genus of Moſſes, conſiſting of ſtalks furniſhed with leaves, and producing ſeparate pedicles ſupporting capſules. The pedicles always growing out of the extremities of the ſtalks, and the calyptræ, which cover the heads, being hairy, the calyptræ of many of the ſpecies are compoſed merely of a downy matter, and frequently they are deeply dentated at the edges; in the other ſpecies, tho' they are membraneous, they are thick covered with hairs. The leaves of ſome of the ſpecies are rigid, in others they are ſofter; in ſome they have a membranaceous appendage at their baſe, by means of which they embrace the ſtalk; in others this is wanting.

The pedicles of the capſules, in this genus, are inſerted into a tube at their baſe, which is ſurrounded with membranaceous leaves. The capſules, in ſome of the ſpecies, are ſquare, in others they are round: the ſquare ones have an apophyſis at their baſe, by which they are connected to the ſtalk; the round ones have nothing of this. The ſummits of ſome of the ſtalks, which do not produce capſules, are ſtellated.

Theſe Linnæus calls the female plants, and the ſtellar part the female flower; but there requires a more perfect diſcovery than has yet been made of the fructification of theſe plants, in order to the determining this with certainty.

The Polytricha, in their manner of growth, greatly emulate the brya. Some of them have no ſtalks, but only a cluſter of leaves at the baſe; ſome conſiſt of ſingle ſtalks, ſome are ramoſe in the manner of the bryum, from the growth of a ſecond year's ſhoot upon that of a former; in this caſe the pedicle ariſes, as in the bryum, from the ſummit of the laſt year's ſtalk, and ſeems therefore to ariſe from the ſide of the plant, not from it's top.

1. *Polytrichum ſimplex capſula quadrangulari foliis ſerratis.* *The ſquare-headed Polytrichum, with ſerrated leaves.*

This is a very tall and large Moſs, though it's ſtem is of the ſimple kind. It grows to ſix or eight inches in height; it's ſtalks are ſtrong and rigid, and it's roots conſiderably long, ſpongy, and fibrous. Part of the ſtalk is uſually buried in the ground, and that has ſhort ſlender leaves, but ſparingly ſet on. The part that is above the ſurface has, on the contrary, much longer, larger, and cloſer ſet ones. They are of a dark, green colour, broadeſt at the baſe, and thence tapering to the point; and, when examined very nicely with the aſſiſtance of a ſmall magnifying glaſs, they are found to be very finely ſerrated round the edges; the ſtalks ſometimes break into two near the top, but it is very rarely. The pedicles of the capſules ariſe from the center of the leaves that cover the top of the ſtalk; they are very robuſt, and two inches or more in length, and are ſurrounded at the baſe with a ſet of leaves, broader, thinner, and more pellucid than thoſe on the ſtalk; theſe ſurround the baſe of the pedicle cloſely, and, when removed, diſcover a purple tube, into which it is inſerted. The baſe of the pedicle is no thicker than the reſt, but it is green; the reſt is of an orange colour. On the head of the pedicle there firſt appears a long, ſlender, and pointed pellicle, covering

vering the embryo capſule; as this grows in magnitude, the calyptra appears more thick, and at length ſplits. The whole is made up of woolly fibres, without any membrane; when this is taken off, the capſules are found to be ſquare, large, and of a browniſh colour; they are filled with a greeniſh, or yellowiſh powder.

Among the plants which produce theſe capſules, there are others with their extremities, radiated in form of a ſtar. Boerhaave firſt ſuſpected theſe ſtarry tops to be flowers; and Micheli adopted the opinion, from whom Linnæus has taken it to diſtinguiſh the genus by; but all, that we ſee produced from theſe ſtarry tops, is no more than young plants like the former, growing as it were out of the head of the old one; they are ſometimes ſeen proliferous in this manner, to the third and fourth degree.

This ſpecies grows very abundantly in our woods, and on heaths. Moſt of the botanical writers have deſcribed it under the name of Polytrichum aureum majus, and Muſcus aureus capillaris major. Linnæus, in his Flora Laponica, calls it, Polytrichum caule ſimplici. Micheli has been ſo fond of the opinion of the ſtarry tops being flowers, that he has figured them ſomething more like flowers than nature makes them. In very favourable ſoils, this plant will grow to a vaſt length.

2. *Polytrichum ramoſum capſula rotunda.*
Branched Polytrichum, with roundiſh heads.

The ſquareneſs of the capſules has been by ſome made the great diſtinguiſhing character of the Polytricha; but this ſpecies is a perfect Polytrichum in it's external form, as well as it's characters, yet it's capſule is round. It grows to two or three inches in height. It's roots are fibrous and tough; it's ſtalk is rigid and firm; it has few leaves, often none toward the bottom; but in the upper part it is very thick ſet with them. The ſtalk generally divides into three or four branches, at about half way of it's height; theſe are about an inch long. The leaves are oblong, narrow, hollowed, and pointed at the ends. The pedicles ariſe from the ſummits of theſe branches, and are very ſlender, about three quarters of an inch long, and of a yellowiſh colour. They are often ſomewhat crooked: on the tops of theſe ſtand capſules of a roundiſh, or, more properly, of an elliptic figure, being more protuberant on one part than in the reſt. The calyptra is of a yellow colour, ſhort and thick, but pointed at the top, and jagged or lacerated as it were at the bottom. The capſules are green at firſt, but afterwards brown, and at length almoſt blackiſh. It's leaves, when examined by the microſcope, are found to be lightly ſerrated. It grows very plentifully on the Alps, and is found in ſome parts of England. The mountains of Wales are ſaid, in ſome places, to abound with it. I have met with it on Mendip-hills.

3. *Polytrichum capſulis rotundis ſeſſilibus.*
The round-headed Polytrichum, with ſhort pedicles,

This is a very ſingular plant, and would, at firſt ſight, be taken for a Moſs of almoſt any other kind, rather than a Polytrichum. It grows to about an inch and half in height; it's ſtalks are divided into ſeveral ramifications, and are all over thick beſet with ſhort and broad leaves. They are broadeſt at the baſe, and terminate in a point which bends downward, and are pellucid, and of a pale green colour. The tops of the branches are thicker than any other part, and their leaves are often diſpoſed in a ſtellar form. The pedicles which ſuſtain the capſules are extreamly ſhort, and do not grow from the middle of theſe, but from the baſes of the other leaves, and alſo from the baſes of thoſe on the ſtalks. The capſules are of an oval figure, and are covered with a calyptra, ſhort and pointed, and very hairy, the hairs ſtanding erect, not lying down lengthwiſe, as in moſt of the other ſpecies.

It is common on the barks of old trees, and alſo on old walls; ſometimes on pales, and the ſides of houſes. Many of the botanical writers have deſcribed it, but few of them have diſcovered that it belonged to this genus. Ray calls it, Muſcus apocarpos arboribus adnaſcens minor. Tournefort, Muſcus capillaceus, minimus, acaulos, calyptra ſtriata; and Moriſon, Muſcus humilis tectorum, ſubfuſcus, capitulis brevibus, pileolis erectis pediculis curtis. Vaillant has figured it, but not accurately.

The other ſpecies of Polytrichum are, 1. The leſſer, ſquare-headed, heath Polytrichum. 2. The leaſt hairy Polytrichum, with ſquare heads. 3. The branched, urn-

urn-headed Politrichum. 4. The dwarf, aloe-leaved, round-headed Polytrichum. 5. The dwarf, long-headed, aloe-leaved Polytrichum. 6. The large, ſhort-pedicled Polytrichum. 7. The ſhort-pedicled Polytrichum, with ſtrait, hollowed leaves. 8. The fine-leaved, curled Polytrichum, with ſharp, hairy calyptræ. 9. The dwarf, fine-leaved Polytrichum, with cylindric heads. Theſe are all the really diſtinct ſpecies hitherto known.

The firſt ſpecies, or great Polytrichum, is the only kind that has the honour of ſtanding recorded as a medicine. The opinion of it's having a virtue to make the hair grow thick has been of very long ſtanding, though founded, perhaps, on no better a reaſon than it's pedicles looking like hair. Tournefort tells us, that it is a very powful ſudorific, and that great cures have been done by it in pleuriſies. It is not in uſe in medicine with us, but we have another uſe of it. It's roots in boggy ground penetrate very deep, and they make in Suſſex a kind of brooms of them.

MOSSES.

Claſs the Fifth. Genus the Third.

SPHAGNUM.

SPHAGNUM is a genus of Moſſes, conſiſting of ſtalks furniſhed with leaves, and of capſules, in ſome reſpects reſembling thoſe of the bryum, but without any calyptræ, and ſtanding on ſo ſhort pedicles, that they do not appear to have any. The pedicles, which ſupport the capſules, grow, in many of the ſpecies, from the ſummits of the ſtalks, but not in all. Linnæus ſuppoſes it to be ſo in all, and makes it a part of the generical character; but there are genuine Sphagna, or Moſſes, with no calyptræ to their capſules, which yet produce them from the ſides of the branches. The ſpecies of this genus differ very conſiderably among one another: ſome of them are very large, others very minute; ſome branched, others ſimple.

1. *Sphagnum molle foliis cavis.*
Hollow-leaved, ſoft Sphagnum.

This is the largeſt of all the family of the Sphagnums, and, indeed, is one of the largeſt of the Moſſes in general. It grows to eight, ten, or twelve inches in height. It's ſtalks are indeed too weak to ſupport themſelves ſingly to ſuch a height, but they always grow in cluſters, and ſo ſtand tolerably well upright. They are uſually ſingle and undivided, but ſometimes they divaricate near the top into two; all the way up theſe ſtalks there grow ſhort branches, three or four together: theſe are about half an inch long each, and droop conſiderably downwards. They are thickeſt near the baſe, and ſmaller to the point; they are thick covered with ſhort leaves, oval, broad at the baſe, and hollow; they are of a white, or reddiſh colour, and are placed one over another in the manner of ſcales. At the top of the plant there ſtand a great number of the ſame kind of little branches; they are ſhorter than the reſt, and ſtand erect, and are placed together in ſuch numbers, that they make a thick and large button at the top of the ſtalk. The leaves on theſe are ſhorter than on the others, and broader at the point. Theſe heads are often redder than the reſt of the plant, and ſometimes greeniſh. From the thick top of the plant there ariſe, in the month of July, capſules; they are round, of a browniſh colour, ſucculent, and in ſome degree reſemble berries, but, when ripe, they ſhed a fine yellow powder: there do not appear to be any pedicles to theſe at firſt, but, as they grow larger, there are ſeen to be ſhort and ſlender ſtalks to ſupport them. Theſe capſules have no calyptra; and another thing in which they differ from thoſe of the other Moſſes is, that they remain but a very little while on the plant. They are but a little time in ripening, and in a very little while after they fall off, and may be found ſcattered about upon the plant, with two holes in each; one in the ſummit, the other made by the pedicle. While recent, it retains ſo much moiſture, that it is very heavy; but, when dried, it is as remarkably light; it is always very ſoft to the touch.

It grows very abundantly with us on heaths, and in bogs. The plant is frequently met with in immenſe cluſters, but it's capſules are rarely ſeen. It is common on the bogs on Hampſtead-heath.

Many of the botanical writers have deſcribed it. Gerard calls it by a very odd name, Muſcus terreſtris vulgaris, a name given by moſt people elſe to one of the hypnums. Dodonæus, whom he copies, calls it by the ſame name; and Parkinſon alſo, Muſcus terreſtris vulgatiſſimus. Ray calls it, Muſcus paluſtris terreſtri ſimilis. Linnæus calls it, Sphagnum ramis reflexis; and tells us, that in Lapland they make childrens beds of it. Lobel gave the firſt figure of it. Dodonæus, Johnſon, and Parkinſon have copied it. Plukenet's figure is made from a dried ſpecimen, and Vaillant's is rather a pompous than a good one. Dillenius's is far the beſt extant.

2. *Sphagnum acaulum foliis capillaceis.*
The acaulous Sphagnum, with capillaceous leaves.

This is a ſpecies ſo extreamly different, in it's ſize and appearance, from the former, that it is ſcarce poſſible to conceive, at firſt ſight, that they are of the ſame family; as that is the talleſt, this is one of the loweſt Moſſes that we know of, and it wants every character of ſingularity in the manner of growth of the former; rather looking like one of the bryums. It's heads, however, when they appear, eaſily diſtinguiſh it, at ſight. It ſeldom grows to more than half an inch in height, often it is much leſs. It's ſtalks are very ſlender alſo, and it's leaves ſo ſmall, and ſo narrow, that they add but little to their thickneſs. The ſtalk is uſually ſingle, but, as in the large one, it ſometimes divides into two or three ramifications. The leaves are ſhort, and of the fineneſs of a hair; they are of a pale green colour, and thoſe on the upper parts of the ſtalk are ſomewhat longer than the others. In April the capſules appear; they are round, of a greeniſh colour, and have no pedicles; they grow brown afterwards, and, finally, reddiſh. They remain on the whole ſummer, and are quite naked, or without calyptræ.

The plant is common with us on heaths, and by way-ſides, but it loves a little moiſture. Many of the botanical writers have deſcribed it. Petiver calls it, Muſcus acaulos trichoides minor; and Vaillant has given a figure of it.

3. *Sphagnum pennatum planum.*
Plane, pennated Sphagnum.

This is an extreamly elegant ſpecies, and is very different, in it's general figure, both from the large and the ſmall ſpecies already deſcribed. The ſtalks of this grow to three or four inches in length, and divaricate into two or three parts, each ſending out alſo ſeveral ſhort ſide branches. All theſe, as well as the main ſtalk, are furniſhed with a double row of roundiſh leaves on each ſide, ſtanding oppoſite to one another, and giving the plant ſomewhat of the appearance of a flat hypnum, but more ſtill of a lichenaſtrum. Theſe leaves are very thin, pellucid, and of a bright green colour. From the alæ of them, at different diſtances along the ſtalks, there ariſe certain little protuberances, formed of ſmall, ſquammous leaves, of a different figure and conſiſtence from the others; and from the ſummits of theſe there grow little capſules, with no calyptræ; they are of a pale yellow colour, and full of a fine yellowiſh powder. When examined in their places of growth, they appear to have no pedicles; but when the cluſters of little leaves, on the ſummits of which they ſtand, are opened, there appear ſhort pedicles, which before were buried in theſe cluſters.

It is not a native of England, nor is yet known to be produced any where but in South America; it grows there very abundantly on the barks of old trees.

The ſpecies of Sphagnum, beſide thoſe here deſcribed, are, 1. A ſoft bog-kind, with fine leaves. 2. The bright, green-pointed Sphagnum, with oval heads. 3. The rough Sphagnum, with red heads. 4. The hoary, nodoſe Sphagnum, 5. The Sphagnum, with numerous heads all leaning one way. 6. The undulated, branched, and pennated Sphagnum, with hairy heads. 7. The undulated, pennated Sphagnum, with plumoſe heads. 8. The dwarf, bulbous Sphagnum. 9. The ſhort and dwarf bulbous Sphagnum. 10. The large, bulbous Sphagnum, with briſtles. 11. The tranſparent, fine, graſs-leaved Sphagnum. 12. The creeping Sphagnum, with very ſmall heads.

MOSSES.

Class the Fifth. Genus the Fourth.

MNIUM.

MNIUM is a genus of Mosses, consisting of stalks furnished with leaves, and producing capsules on pedicles rising from them, like those of the other Mosses of this class; and, beside these, on other pedicles, bearing a kind of naked heads of a dusty surface, and having no calyptræ.

These two kinds of heads are, in some species, produced on the same plant; in others on different plants, of the same species.

The pedicles which support the membranaceous heads, or capsules, are long and naked; those which bear the dusty heads are short, and are in some of the species naked also, but in others they are furnished with little leaves. These dusty heads, when examined with a good microscope, are found to consist of congeries of green, foliaceous membranes, expanded in form of roses.

1. *Mnium foliis brevibus carinatis.*
The short and hollow-leaved Mnium.

This is a very small species, and, when in any but it's flowering state, is easily mistaken for one of the little bryums. It grows usually to about half an inch in height, sometimes not so much; and sometimes, in very favourable soils, to an inch. Many of the plants usually grow together, so as to form a large tuft, and that of a pleasant, green colour, and very pretty appearance. The stalks are often simple, sometimes divided into three or four branches; they stand erect, and the leaves are set less thick on them, than on the generality of the Mosses: they are short and sharp-pointed, and of a pale green. In March there arise, from the summits of some of the branches, short and naked pedicles, which support each a head of the dusty kind; these heads are round, of the size of a moderate pin's head, and of a green colour. They soon come to their maturity, and soon decay. From the summits of the other branches there arise about the same time longer pedicles, of a yellowish colour, which support heads of the capsular kind, perfectly resembling those of the bryums; they are oblong, and have their calyptræ like those of the other Mosses, but white at the bottom, and brown at top. These heads are much longer in coming to maturity, than the other heads, and remain a great while longer on the plant.

The dusty heads are very frequent on this plant, but the capsular ones are met with but rarely. The plant is common with us on ditch-banks, and on heaths: where it has a great deal of moisture it grows much larger than in dry places. Tournefort calls it, Muscus capillaceus minimus, capitulo minimo pulverulento; and Micheli from Ray, Muscus trichoides parvus, capitulo conglomerato seu botryoide. Haller calls it, Bryum alternans calyptra variegata scyphulis folioſis. Buxbaum censures Morison's figure, but his own, which he gives in the place of it, is worse. Vaillant has not figured the capsular heads at all, nor have many others who have figured the plant.

2. *Mnium capitulis numerosis.*
Many-headed Mnium.

This is a taller and more robust plant than the former; it grows to two inches in height, and it's stalk is frequently quite simple; sometimes it sends out a few branches, but, when it does, these are always short and inconsiderable. The leaves stand much thicker about the upper part of the plant, than about the lower. They are oblong, narrow, of a dusky green colour, and pointed at the end: the pedicles, which support the dusty, naked heads, are short; they proceed from the alæ of the leaves, and stand very thick; it is common to meet with thirty or forty upon a single plant. These pedicles are short, and are not naked, but have a kind of little, membranaceous leaves, standing pretty close upon them. The heads are small and round,

not

not exceeding a ſmall pin's head in ſize; they laſt but a little time on the plant, and no other heads have as yet been obſerved upon it.

Dillenius found this Moſs dried among Mr Sherrard's papers; and in Buddle's Hortus Siccus, under the names of Muſcus alter botryoides elatior, and Muſcus pulverulentis forſitan variis capitulis. I have met with it growing in ſome damp places on the ſide of Rook's Hill near Goodwood, the ſeat of the late great patron of botany, of all the ſciences, and of all who ſtudied them.

3. *Mnium repens pennatum.*
The pennated, creeping Mnium.

This is a ſpecies ſo extreamly different from the two others, that, at firſt ſight, one would ſcarce imagine it could belong to the ſame genus. It rather reſembles a lichenaſtrum, or ſome other Moſs of that kind. It never riſes at all from the ground, but creeps upon it, ſending down fibrous roots from every part. It grows to two inches in length, and generally ſends out three or four ſmall ramifications. The main ſtalk is furniſhed with a double row of thin and ſomewhat broad membranaceous leaves, very pellucid, and of a gloſſy ſurface. Theſe are ſo regularly placed, that they give it a pennated look, and are ſmaller toward the baſe of the ſtalk, than in the middle of it, and from thence grow ſmaller again toward the end; the branches have the ſame ſort of leaves, and diſpoſed in the ſame manner, except that theirs are largeſt at the baſe of the branch, and gradually ſmaller all the way up: the leaves on theſe alſo are narrower, in proportion to their length, than the others. From the ſummits of theſe branches there grow little, round, naked, and duſty heads; they are of a green colour, and ſtand on ſhort pedicles: they laſt but a little time, and their pedicles fall off with them, ſo that the plant is uſually found without them. No other kind of heads have yet been obſerved in this ſpecies, though frequently met with. It grows much about London, in Cane-wood and on Hampſtead-heath; but it has not been deſcribed by any author, except Dillenius, who acknowledges, that he met with the firſt mention of it in ſome manuſcript notes of Mr Doody's.

Haller is for referring the ſpecies of this genus to the bryums; and moſt of the authors, who have written about them, determine the capſular heads to be the male part of the fructification, the duſty ones the female; but the frequency of the latter, and the ſcarcity of the former, plead much againſt it, and their time of appearance more ſo: when both are found on the ſame plant, the duſty ones are generally decayed, and fallen off, long before the capſular ones have arrived at their maturity.

The ſpecies of Mnium, beſide thoſe here deſcribed, are, 1. The tranſparent, ſerpyllum-leaved Mnium. 2. The larger, upright, and forked bog Mnium. 3. The tranſparent, trichomanes-like Mnium, with divided leaves. 4. The lichen-leaved Mnium, improperly made a new genus by Micheli and Linnæus, under the name of Blaſia; and 5. The ſhort, irregularly-branched Mnium.

M O S S E S.

Claſs the Fifth. Genus the Fifth.

FONTINALIS.

FONTINALIS is a genus of Moſſes, conſiſting of branches furniſhed with leaves, and producing alſo capſules of the membranaceous kind, covered with calyptræ, but having no pedicles, or very ſhort ones: they are incloſed in a ſort of vagina, or cup, of a ſquammous ſtructure, and produced in the alæ of the leaves.

The Fontinales are but few in number, and are very regular and ſimilar one to another in their manner of growing. There are only five known ſpecies, and they are all of the ramoſe kind.

1. *Fontinalis foliis latioribus.*
Broad-leaved Fontinalis.

This is a very large Moſs, and very conſpicuous in it's manner of growing. It is uſually affixed to ſome ſolid matter, in or at the ſide of the water, and floats at length from

from that. It grows to five or ſix inches in length; it's ſtalk is brown, or blackiſh, very firm and ſtrong, and divaricates uſually into ſix or eight ramifications. The leaves are oblong, broad, and of a fine green colour, ſmooth and gloſſy, and conſiderably pellucid. They do not ſtand ſo thick as the leaves of many the Moſſes do: they are ſmall toward the bottom of the ſtalks, largeſt in the middle, and ſmall again toward the extremity, where they ſometimes alſo are convoluted ſo as to form a kind of point. They are broadeſt at the baſe, and, from thence, grow ſmaller gradually to the point, and are placed in ſuch order, that they give the plant a kind of triangular figure. The capſules grow from the middle to the lower part of the branches; there ariſe from the alæ of the leaves, in this part, a kind of membranaceous vaginæ, or cups, of an oval figure, open at the upper part; and, from this opening, there appears the top of a membranaceous capſule, like thoſe of the other Moſſes, covered with it's calyptra: within the vagina, there is contained an oblong capſule, wholly like thoſe, it's aperture being ſurrounded, as in the other, with a number of pyramidal bodies, viſible, when the calyptra is taken off. Theſe capſules ſtand on extremely ſhort pedicles, they appear to have none at all. There are a few membranaceous leaves at their baſe; and the whole vagina, when examined, is found alſo to be compoſed of ſuch membranes, laid over one another, like ſcales, in ſo nice a manner, that the whole ſeems to conſtitute only one membrane. This ſpecies is very common in brooks and rivers about London, and elſewhere; in ſtanding waters it is ſometimes rooted in the mud; in running ones it always affixes itſelf to wood, or to ſome other ſolid ſubſtance.

Moſt of the botanical writers have deſcribed this ſpecies; C. Bauhine calls it, Muſcus aquaticus folio expanſo; Ray, Muſcus aquaticus triangularis; Læſelius, Muſcus aquaticus denticulatus; and Dillenius, in his Catalogus Giſſenſis, Selago aquatica, foliis pellucidis, triangularibus, acutis, complicatis cincta; but, in his ſucceeding edition of Ray's Synopſis, and in his Hiſtoria Muſcorum, he diſtinguiſhes it for a Fontinalis.

2. *Fontinalis foliis lanceolatis.*
The Fontinalis, with lanceolated leaves.

This is a ſmaller ſpecies than the former. From the ſame root it uſually ſends up a great number of ſmall and ſlender ſtalks; they are of a browniſh duſky colour, and very tough and ſtrong. They grow to three or four inches in length, and are ſometimes ſingle, ſometimes divided into two or three branches. The leaves do not ſtand ſo thick as in many of the other Moſſes; they are ſmall, narrow, and obtuſely pointed, and ſtand in two rows, one oppoſite to the other. They are of a pale yellowiſh, green colour, as is alſo that part of the ſtalk which is near the ſummit. From the alæ of the leaves there ariſe very ſhort pedicles, which ſupport oblong capſules, with their calyptræ on the ſummit, and with a tender membraneous vagina, or cup, at the baſe, which falls to pieces very eaſily.

It is an American Moſs, and not known any where there but in the hotter countries. Plumier has deſcribed it under the name of Muſcus linariæ foliis acutiſſimis. It grows up out of the mud, in the bottom of ſtanding ſhallow waters.

3. *Fontinalis foliis capillaceis.*
Capillary-leaved Fontinalis.

This is a very beautiful ſpecies. It grows to ſix or eight inches in length, and ſends out a number of branches, which are uſually ſingle, but ſometimes divided into two or three ramifications. The leaves ſtand very cloſe and thick; they are oblong, extremely narrow, and hollowed toward the baſe, and are of a duſky green in the young branches, and of a blackiſh hue on the larger ſtalks. From the alæ of the leaves, and particularly about the origin of the ramifications, there grow a peculiar kind of vaginæ, compoſed of membranaceous leaves, folded together, and, at firſt, terminating in a ſharp point. Theſe vaginæ are remarkably long, and, after they have appeared ſome time, they open at the point, and there appear capſules of a roundiſh figure, like thoſe of the other Moſſes of this claſs. There is no apparent pedicle to theſe capſules, but, when the vagina is opened, a pedicle is found running down it's whole length. The whole plant has much the appearance of a hypnum, but it's ſingular vaginæ ſufficiently declare it to be a Fontinalis.

It grows in ſtanding waters, ſometimes in rivulets, and is very common in North America. Dillenius is the only author who has deſcribed it; he received ſpecimens of

it

it from Penſylvania, gathered there by John Barham, at the ſame time that mine and thoſe of all the other botanical people who have it were ſent over.

There are only two ſpecies of Fontinalis known, beſide thoſe here deſcribed: theſe are, 1. The ſmaller, triangular-leaved Fontinalis, with capſules at the ſummits of the branches. 2. The fine-leaved, blackiſh, gloſſy Fontinalis.

MOSSES.

Claſs the Fifth. Genus the Sixth.

HYPNUM.

HYPNUM is a genus of Moſſes, conſiſting of ſtalks and leaves, and producing membranaceous capſules, like thoſe of the reſt of this claſs: theſe capſules ſtand on pedicles, which grow from the alæ of the leaves, and have, at their baſe, a kind of ſquammous covering, formed of a matter quite different from the leaves of the plant. The capſules of the Hypnum all have their calyptræ: they are of different ſhapes, but uſually oblong, and the pedicles on which they ſtand are uſually long alſo. The ſquammous involucrum, at the baſe of the pedicle, is called by Dillenius perichætium, and is the great characteriſtic of the Hypna, no Moſſes of any other genus having it in this form. The Hypnum is a very large genus; Dillenius has deſcribed no leſs than ſeventy-ſix ſpecies of it: ſome of theſe, however, are but varieties of the ſame plant, under different ſtates. The Hypna, in general, are large Moſſes, and are branched; ſome of them, however, want this obvious character, as ſome of the bryums alſo are branched, and, at firſt ſight, reſemble the Hypnums.

1. *Hypnum ramoſum foliis triangularibus minoribus.*
Branched Hypnum, with ſmall, triangular leaves.

This is the Moſs properly called Muſcus terreſtris vulgatiſſimus. It is by much the moſt common of all the Moſſes. Some authors have diſtinguiſhed it by this name, but moſt others have called other Moſſes, neither common, or of the land kind, by it, as the great ſphagnum, &c. The ſtalks of this Moſs grow to ſix or eight inches in length; they uſually divaricate into ſeveral ramifications, and each of theſe ſends out, alſo, other branches, which are ſimple, and of half an inch, or more, in length. The whole plant is covered with ſhort and ſmall leaves, very thick ſet, and falling like ſcales over one another: they are of a triangular figure, broad at the baſe, and terminate in a point. They are of a pale yellowiſh-green colour, and of a ſhining ſurface. From the alæ of the leaves there riſe pedicles of two inches in length, ſlender, gloſſy, and of a a reddiſh brown colour; theſe ſuſtain capſules of an oblong figure, and theſe are covered with a calyptra, and contain a fine greeniſh-yellow powder.

It is extremely common on barren ground, and under hedges, but the capſules are not frequent on it; ten thouſand cluſters of the plant may be examined, before there are any of them found.

Moſt of the botanical writers have deſcribed this ſpecies. Ray calls it, Muſcus terreſtris latioribus foliis, ſive vulgaris; and Tournefort, Muſcus ſquammoſus ramoſus.

2. *Hypnum erectum rigidum, capſulis cernuis.*
The rigid, erect Hypnum, with cernuous heads.

This is an extremely different plant from the former in it's general figure; as that is procumbent and weak, this ſtands erect, and it's ſtalks are firm and rigid. It riſes to three or four inches in height; it's ſtalks are of a blackiſh colour, and are almoſt naked for one half of their height, having in this lower part only a few yellowiſh membranes, here and there upon them; from this part they begin to ſend off branches, which, in the whole, are very numerous; and theſe again ſend off others, ſo that the whole plant much reſembles a tree, whoſe trunk is naked, but it's head very full of boughs. All theſe branches, as well as the main ſtalk of the plant from this height, are thick covered with leaves, broad at the baſe, and terminating in a point; they are ſhort, and of a dark green colour. The root is creeping, and ſends up a number of

theſe plants, one near another, The pedicles, which ſuſtain the capſules, are about three quarters of an inch long, of a reddiſh colour, and the capſules ſhort and tumid: they do not ſtand erect, but lean a little.

This beautiful little Hypnum is common in woods, about the roots of old trees; Charlton-wood, near Woolwich, abounds with it. The botanical writers in general have deſcribed it. Tournefort calls it, Muſcus ſquammoſus, dendroides, radice repente; and Pontedera, Muſcus ſquammoſus, dendroides, ramoſus, ſquammis hinc inde eleganter diſpoſitis. The Muſcus aquaticus pennatus fruteſcens of Moriſon is alſo a variety of this ſpecies, though very ill figured.

3. *Hypnum filicinum criſtatum.*
Fern-leaved, creſted Hypnum.

This is an extremely elegant little plant: it grows, at the utmoſt, to about an inch and half in length. It conſiſts of a ſingle ſtalk, ſtrait, ſlender, and curled at the extremity, which ſends off, on each ſide, a ſeries of branches, of about a third of an inch in length in the middle, and growing gradually ſhorter as they approach the end; the extremities of theſe branches are curled back, in the ſame manner as thoſe of the main ſtalk, and both that, and theſe, are covered with leaves, ſtanding very thick upon them. Theſe are ſmall, and of an oblong figure, pointed at the end, and crooked, in the ſame manner as the ſtalk: they are of a yellowiſh colour, and the bending of theſe, and curling of all the branches, gives the plant a very beautiful, creſted appearance. From the alæ of the leaves, in ſeveral parts, there ariſe pedicles, ſuſtaining capſules; the pedicles are about half an inch long, and the capſules are ſhort and tumid, of an oval figure, and brown colour. The regular diſpoſition of it's branches gives it much the appearance of a fern, and the curling makes it reſemble the creſt of a helmet.

It is not uncommon with us, on heaths, and about the ſtumps of trees, and the bottoms of old walls: it is alſo frequent in other parts of Europe, and in North America. Bobart firſt found it in England, and called it, Muſcus terreſtris, repens, ſubflavus, foliolis criſpis, minoribus ramuliſque denſe confertis. Boerhaave calls it, Muſcus repens, ramoſus, pennatus, ſubtiliſſime diviſus, foliis criſpis reflexis.

4. *Hypnum pennatum baſi capſuliferum.*
Pennated Hypnum, producing it's capſules from the baſe of the leaves.

This is one of the ſmalleſt of the Hypnums, and has ſo little the appearance of the reſt of the genus, that nothing but an examination of the fructification of it could diſtinguiſh it's belonging to it. It conſiſts of a ſingle leaf, of about half an inch in length, and of a pennated form, conſiſting of a double row of pinnulæ, about eight or ten in each row; but theſe not ſeparate, and affixed to a rib, but formed only of diviſions, or ſegments, of one common leaf: there are uſually five or ſix of theſe leaves growing from one root. They are of a deep green colour, and gloſſy ſurface, and are ſomewhat pellucid. From the baſe of each of theſe leaves there ariſes a ſingle pedicle, about half an inch in height, and of a browniſh colour, covered with a membranous perichætium at the root, and ſuſtaining, at it's top, a ſmall, oblong, and tumid capſule, not ſtanding erect, but leaning a little, but covered with a calyptra, the point of which turns upwards; the capſules are green, at firſt, but brown, when ripe. The leaves have each a ſlender rib running all along it, and are ſometimes broader, ſometimes narrower, but a ſeventh of an inch is about their uſual breadth. Many of the botanical writers have deſcribed this Moſs, but they have thought of very different titles to expreſs the ſhape of it's leaves by. Ray calls it, Muſcus filicifolius, ſeu pennatus minor; and Dillenius, Hypnum taxiforme. Vaillant calls it, Muſcus pennatus capitulis adianti; and Clayton, in Gronovius's Flora Virginica, Lichenaſtrum foliis erectis, pinnatis, ſaturate viridibus. It grows very abundantly in our woods, and on heaths, eſpecially where there is a moiſt ſoil.

The other more ſingular ſpecies of Hypnum are, 1. The tranſparent, bird's-foot-leaved Hypnum. 2. The large, ſhining, membranaceous, water Hypnum. 3. The large, ſhining, firm Hypnum, with tamariſk leaves. 4. The curled, fern Hypnum. 5. The undulated, pennated Hypnum, with ſhort pedicles. 6. The great, ſcorpion, creeping, bog Hypnum. 7. The leſſer, upright, ſcorpion, bog Hypnum. 8. The great, triangular-leaved, upright Hypnum. 9. The long, ſharp-

leaved,

leaved, floating Hypnum. 10. The blunt, cypreſs-like Hypnum. 11. The finer, cypreſs-leaved Hypnum. 12. The long, pedicled, ſhrub Hypnum, with erect heads. 13. The ſlender, ſilky Hypnum, with pointed heads. 14. The black, water Hypnum, with hooked leaves. 15. The round, branched, dark green Hypnum. 16. The ſquare-branched Hypnum. 17. The ſmalleſt, fern Hypnum, with tamariſk leaves. 18. The fine, float Hypnum, with ſmall heads. 19. The ſmall, creeping, club Hypnum, with ſhort pedicles. 20. The ſhort-ſhanked, mouſe-tail Hypnum.

MOSSES.

Claſs the Sixth.

Such as produce capſules without pedicles, and without calyptræ.

Genus the Firſt.

LYCOPODIUM.

LYCOPODIUM is a genus of Moſſes, conſiſting of branches, furniſhed with leaves, and producing ſpikes, formed of ſquammæ, of a different figure from the leaves; at the baſes of which there are placed capſules, of a kidney-like ſhape, which have no cup, or vagina, and, when ripe, open longitudinally into two parts, and diſcharge a great quantity of fine powder; and having no other viſible ſeed.

The Lycopodia have all one general appearance, by which they may be diſtinguiſhed to belong to the ſame family; but ſome of them have their ſpikes ſupported on peculiar pedicles, ſome have them continuous to the reſt of the ſtalk. The ſpecies of this ſingular genus are not very numerous, but they are, in general, very beautiful.

1. *Lycopodium repens anguſtifolium hirſutum.*
Creeping, narrow-leaved, hairy Lycopodium.

This is the moſt frequent ſpecies of Lycopodium with us, and is known by the name of the Common Lycopodium, or Wolf's-Claw Moſs.

It does not grow erect, but creeps flat upon the ground, extending it's branches to a great length, and divaricating a great many ways; pieces of a yard, or more, in length, may be taken up, if raiſed carefully, without breaking: theſe ramifications all ſend out numerous roots, as they creep along the ground, and are very thick beſet with leaves; theſe are narrow, oblong, and terminate each in a long white hair. They are of a pale green colour, and bend a little backwards. The branches are produced from the main ſtalk, in an alternate order, and the extremities of the branches are thicker, and, from the alæ of the leaves, near their inſections, ariſe the ſpikes, which are rough, and more hairy than any other part; it is theſe thick ends of the plant that have given occaſion to it's name of Wolf's Claw Moſs, not the ſpikes from the tops of the branches. The ſpikes have no pedicles at firſt, but, before they arrive at their maturity, they are raiſed from the plant by pedicles of two inches, or more, in height. Theſe are ſometimes ramoſe, but uſually ſingle. The ſquamınæ which form the ſpikes are broad at the baſe, and terminate in a fine white hair; the ſpikes are about an inch long, and a ſixth of an inch, or more, in diameter; the capſules are large, and ſhaped like a kidney, and are lodged in the alæ of the ſquammæ of the ſpike. It is a common Moſs in many parts of England; the heaths in Suſſex afford it abundantly; it uſed alſo to grow on Hampſtead-heath, but it is loſt there now. Moſt of the botanical writers have deſcribed it under the names of Lycopodium vulgare, and Chamæpuce: ſome have called it, Muſcus terreſtris clavatus, and others, Cingularia.

2. *Lycopodium digitatum ſpicis quadruplicibus.*
Digitated Lycopodium, with four-fold ſpikes.

This is an extremely ſingular and elegant Moſs. It grows to a foot, or more, in length, and is erect, not procumbent, as the common kind. It's radical ſtalk creeps on the ſurface

ſurface of the earth, and ſends down a multitude of fibres; from this there riſe, at an inch or two diſtance, ſtalks of ſix or eight inches high; they are roundiſh, and are covered with ſmall leaves, or ſquammous membranes. Theſe ſend out, on every ſide, a kind of digitated branches, an inch or two in length, and extending as much in diameter. They iſſue ſingle from the ſtalk, but they divaricate into ſix or eight ramifications, which, dividing again each into two at the extremity, form, in the whole, a very elegant cluſter; theſe ramifications are thin and flattiſh, but ſomewhat convex on the upper ſide, and concave on the under. They are of a yellowiſh-green colour, and, in ſome degree, reſemble the leaves of the arbor vitæ; they are very tough and firm, and each is compoſed of a middle rib, thus divaricated, and covered with ſmall leaves, broad at the baſe, and narrower to the point, preſſed cloſely down upon it. From the upper parts of the plant ariſe pedicles of three, four, or more inches long, each divided into two branches at the ſummit, and each of theſe branches divided into two again; at the top of each of theſe laſt ramifications there grows a ſpike, ſlenderer than that of the common Lycopodium. The pedicles have a few ſquammous leaves on them, and the ſpikes are compoſed of ſquammæ broad at the baſe, ſhort, and terminating in a point; in the alæ of theſe are placed capſules, of a kidney-like ſhape, filled with a fine yellow powder.

It is a native of North America: Penſylvania and Virginia produce it in abundance: it produces it's ſpikes in Auguſt and September.

The other ſpecies of Lycopodium are, 1. The ſavin-like Lycopodium, called Cypreſs Moſs, and the Heath Cypreſs. 2. The tall, double-forked Lycopodium of the Eaſt-Indies. 3. The great, ſlender, ſpiked, Eaſt-Indian Lycopodium: this grows to three feet in height. 4. The ſmall, creeping Lycopodium, with ſingle ſpikes, and extremely long pedicles. 5. The ſhort, creeping Lycopodium, with ſingle, upright ſpikes. 6. The fox-tail Lycopodium, ſending roots from it's branches. 7. The juniper-leaved Lycopodium, with no pedicles to the ſpikes. 8. The fine-leaved, curled, ſhrub Lycopodium, with ſhort, drooping clubs, or ſpikes: and, 9. The ſharp, ſquare-ſpiked, hoary Lycopodium: both theſe laſt alſo have ſpikes without any pedicles.

MOSSES.

Claſs the Sixth. Genus the Second.

TRISPERMIUM.

TRISPERMIUM is a genus of Moſſes, conſiſting of ſtalks, furniſhed with leaves, diſpoſed in three regular ſeries; two ſeries or rows of larger and broader placed oppoſite to one another, in the ſame plane, on the two ſides of the ſtalk; and a third ſeries of ſmaller leaves covering the upper part of the ſtalk, or rib, between the other two; and producing ſpikes, ſometimes with, ſometimes without pedicles; which ſpikes contain capſules of two kinds, thoſe of the one kind holding only a powder, and thoſe of the other containing each three ſeeds. The ſpikes of theſe Moſſes are leſs different from the reſt of the plant in their ſtructure than thoſe of the lycopodium, and in many of the ſpecies, after a certain period, become undiſtinguiſhable from the ſtalks on which they grow. Dillenius has called this genus, from the reſemblance it's ſpikes bear to thoſe of the lycopodium, Lycopodioides. It ſeems properer to diſtinguiſh them by a name which expreſſes the great ſingularity of it's producing ſeeds, three in a capſule.

1. *Triſpermium ſpicis brevibus ſeſſilibus.*
The ſhort-ſpiked Triſpermium, without pedicles.

This is a creeping Moſs; it's branches lie flat upon the ground, and extend themſelves to five, ſix, or more inches in length, and to as much in breadth; they ſend out numerous ramifications, and theſe ſubdivide themſelves again into ſmaller. They ſend out roots in ſeveral places, and are ornamented on each ſide with a row of broad and obtuſely-pointed leaves, and with a row of ſomewhat ſhorter and ſmaller between them. The ſpikes are ſhort and ſmall; they grow from the extremities of the

the young branches, without any pedicles, and generally grow two from the ſame baſe. They are cloathed with ſquammæ, much reſembling the leaves of the plant in ſhape, and, at the baſes of theſe, there ſtand capſules of a roundiſh figure, bivalve, and containing a fine powder: beſide theſe, there are alſo other capſules, not only placed in the alæ of the other ſquammæ of the ſpike, but alſo in the alæ of the leaves of the plant; theſe are ſmall, and ſcarce viſible, at firſt; but, in fine, they increaſe to a conſiderable ſize, and each contains three round and tolerably large ſeeds. As theſe increaſe in ſize, they thruſt out the leaves from the ſtalk, and, the ſquammæ of the ſpikes, at the ſame time, growing larger, the ſpikes themſelves become undiſtinguiſhable from the branches of the plant.

It is a very ſcarce plant: it has been talked of as growing in England, but it does not appear that there ever was any better foundation for this opinion than people's miſtaking ſome other plant for it. Cluſius received it from Portugal, and figured it: almoſt all the late authors have copied his figure, and know no more of the plant than what they collect from him. Dr Shaw, indeed, found it in the Eaſt, and it has ſince been diſcovered in South America. It grows in moiſt, ſtony places. Moſt of the old authors have deſcribed it under the name of Muſcus denticulatus, and Muſcus terreſtris Luſitanicus. Ray calls it, Muſcus denticulatus minor; and Buxbaum, Lycopodium parvum, herniariæ foliis; he has a good figure of it, but erroneouſly calls it a new-diſcovered plant. Lobel ſays it grows on Mendip-hills; and Merret, in Lancaſhire; but no body ever found it in either of thoſe places.

2. *Triſpermium ſpicis longioribus pediculatis.*
The Triſpermium, with long ſpikes on pedicles.

This is a very elegant Moſs, of the creeping kind. It's branches lie cloſe upon the ground, and are divaricated every way into a number of ramifications, which often divide again into ſtill ſmaller; every branch has three ſeries of leaves on it; two of larger, placed oppoſite to one another, and a third of ſmaller, covering the rib between them. They are broad at the baſe, and have no pedicles, and are placed rather alternately, than exactly overagainſt one another. The middle ſeries of leaves is, as it were, double, one ſmall leaf growing at the baſe of every larger one. Theſe are narrower, as well as ſhorter, than the others, and are ſmooth; the others are a little curled, or crooked. From ſeveral parts of the branches there ariſe pedicles of an inch long, each ſuſtaining ſometimes a ſingle ſpike, ſometimes two, ſometimes three, of the ſame length with their pedicles, and ſomewhat thicker, but not much ſo; theſe are compoſed of oblong ſquammæ, convex on one ſide, and concave on the other, and of a yellowiſh colour. At the baſes of theſe there are affixed bivalve capſules, containing a fine powder, and, on the branches themſelves, as well as at the baſes of the lower ſquammæ of the ſpike, there are alſo other capſules of an oval figure, each containing three ſmall ſeeds: theſe latter capſules are much ſmaller than the others, and are much leſs frequently found on the plant.

It is found on the Alps, and in many parts of Swiſſerland. It has been ſaid to be a native of England, but we do not find it here at preſent, and, probably, thoſe, who mention it's being found with us, took ſome other ſpecies for it. Ray deſcribes it under the name of Muſcus denticulatus major; and Tournefort and moſt of the other botanical writers call it by the ſame name; but ſome call it, Denticulatus minor; and many have wrongly aſſerted, that it is the ſame ſpecies with the former: the difference of the ſpikes ſufficiently proves the contrary.

3. *Triſpermium erectum ſpicis triangularibus.*
Erect Triſpermium, with triangular ſpikes.

This is a ſpecies of Triſpermium extremely different, in it's general figure, from the foregoing kinds: it is an erect, robuſt, and large plant. It grows to a foot, or more, in height; it's ſtalk is very tough and firm, and carried up ſingle for about four inches, during which ſpace it is covered with a few ſcattering ſquammæ. From this height it begins to ſend out branches in great numbers, which ramify again, and form, upon the whole, a plant with much of the external appearance of a fern. The branches all have, on each ſide, a row of leaves, ſhort, and moderately broad, rigid to the touch, of a ſmooth ſurface, and of a beautiful green colour; and, between theſe two rows,

is another ſeries of ſmaller leaves, covering the upper ſide of the ſtalk, but the oppoſite ſide is bare.

The extremities of the branches in this ſpecies are terminated by ſhort ſpikes, of a ſquare figure, and without pedicles. Theſe ſpikes are ſlender, and are compoſed of ſmall ſquammæ, hollow, broad at the baſe, and terminating in a point. At the baſes of theſe ſquammæ there ſtand capſules, which are bivalve, and are ſome of them filled with only a fine powder; others of them contain three white roundiſh ſeeds each: one of theſe capſules ſtands at the baſe of every ſquamma, where there is not one of the others.

This ſpecies is of American origin, and has not been met with any where in Europe. Petiver and Ray deſcribe it under the name of Muſcus denticulatus major Caledonicus, perelegans, filicis in modum pinnatus. Plukenet calls it, Muſcus ſquammoſus erectus; and Dillenius, Lycopodioides dentatum, erectum, filicinum, caule tereti ramoſiſſimo.

The other ſpecies of the Triſpermium, deſcribed by authors, are, 1. The creeping, denticulated Triſpermium, with footleſs ſpikes. 2. The ſhrubby Triſpermium, with looſe and naked ſpikes. 3. The upright, acacia-leaved Triſpermium. 4. The ſmall, erect Triſpermium, with fern-like leaves. 5. The ſpleenwort-leaved Triſpermium. 6. The furcated, yew-leaved Triſpermium. 7. The ſmaller, ſtiff Triſpermium, with denticulated leaves. 8. The ſcaly Triſpermium, with curled points. 9. The ſpreading, forked Triſpermium. Theſe are moſt of them of American origin.

MOSSES.

Claſs the Sixth. Genus the Eighth.

SELAGO.

SELAGO is a genus of Moſſes, conſiſting of branches furniſhed with leaves, and producing capſules in the alæ of the leaves, which have no pedicle, nor any coolyptra, but are formed of two valves, and have a ſingle cavity in them, containing a fine yellowiſh powder.

The ſeveral ſpecies of Selago are all robuſt and ſhrubby plants, in reſpect of the other Moſſes, and their branches are generally divided dichotomouſly.

1. *Selago erecta longifolia.*
Long-leaved, upright Selago.

This is a robuſt plant, it grows to four or five inches height, and ſometimes more. It riſes with a ſingle ſtalk from the root, but this ſoon divides into two branches, and each of theſe into two more. This is the moſt frequent ſtate of the plant; but it ſometimes is more, ſometimes leſs divided, though always in this dichotomous manner. The ſtalks are covered very thick with leaves, eſpecially toward the top, ſo that they uſually appear larger there than at the bottom. The leaves are narrow, oblong, and pointed; they are a little convex on the outſide, and concave on the inner, and they are of a yellowiſh colour. The ſtalks are conſiderably thick, and, where they are naked, are ſeen to be browniſh. In the alæ of the leaves, from the bottom to the top of the plant, there ſtand in autumn little capſules, which, when they are opened, are found to contain a fine yellow powder. They are of a kidney-like ſhape, and naturally open longitudinally; about the time that the capſules are full grown, it is common to ſee little oblong, criſtated bodies, compoſed of ſix ſegments ſtanding out about the tops of the branches; theſe ſeem to be embryo plants, ready to fall to the ground, and take root.

It is a common plant on ſome of the Welch mountains, and in ſome parts of Yorkſhire and Derbyſhire; elſewhere, with us, it is very ſcarce: abroad it grows abundantly on the Alps, and other mountains. Moſt of the botanical writers have deſcribed it. Ray, Bobart, and many others have called it, Muſcus erectus abietiformis. Tournefort, Muſcus ſquammoſus abietiformis; and others, Selago foliis et facie abietis.

2. *Selago foliis anguſtiſſimis confertis.*
The narrow, cluſter-leaved Selago.

This is a very tall and robuſt plant. It grows to twelve or fourteen inches high; it's ſtalk riſes ſingle from the root, and is at the bottom but moderately thick, yet very robuſt and ſtrong; up ſomewhat higher it grows conſiderably thicker, and divides into two branches: each of theſe, after they have gone up ſingle three or four inches, divide again into two, and theſe ramifications, finally, into two more. The diviſion is ſometimes carried yet farther, but this is the uſual ſtate of the plant; all the branches are covered with a number of oblong, narrow, and pointed leaves; thoſe on the lower part of the ſtalk are ſhorter than the reſt, and bend more downward. The others are longer, and, though not quite erect, yet droop but very little. In the alæ of the leaves, from the top of the plant down to the baſe of the ſecond ramification, there are placed capſules of a kidney-like ſhape; theſe are compoſed of two valves, and opening longitudinally, when ripe, they throw out a quantity of a fine yellow powder. The whole plant is much of a thickneſs, from the firſt ramification to the very ſummit of the branches.

It grows in many parts of America, in their damp moraſſes, and in ſome of their foreſts. Plumier has deſcribed and figured it under the name of Muſcus ſquammoſus maximus, erectus, ſabinæ folio, though perhaps erroneouſly, by the fault of the preſs, for the leaves are not at all like ſavin. Dillenius has much better named it, Selago coridis foliis reflexis.

3. *Selago foliis brevioribus.*
Short-leaved Selago.

This is the weakeſt of all the Selago kind, yet it frequently ſtands quite erect, tho' it grow ſingly, and riſe to ten or twelve inches in height. It's ſtalk is of the thickneſs of a ſmall packthread at the baſe, and is pretty thick, covered with leaves down to the very ground. It continues of much the ſame thickneſs nearly to the top, where it ends ſomewhat ſmaller. It generally divides, at about half it's height, into two parts, and each of theſe divides again, once at leaſt; beſides this alſo, it ſometimes ſends out branches near the middle of it's height, and theſe always divide into two parts, and thoſe ſometimes are divaricated again near their tops. The leaves that ſurround the ſtalk near the baſe are very ſhort, and browniſh; thoſe on the reſt of the plant are of a yellowiſh green, and, though ſhorter than in any of the other ſpecies, yet are of an oblong figure, broadeſt at the baſe, and pointed. From the top of the plant, to near the firſt diviſion of the main ſtalk, there are placed capſules, not of a kidney-like ſhape, but oval, which divide, when ripe, into two parts, and ſhed a quantity of a fine yellow powder.

Plumier firſt figured this ſpecies; he calls it, Muſcus ſquammoſus maximus coridis folio vitriculis longioribus. Tournefort calls it, Muſcus ſquammoſus Americanus maximus. Dillenius calls it, Selago foliis camphoratæ. It is of American origin; it grows in their foreſts, about the ſtumps of trees.

There are only three known ſpecies of Selago, beſide theſe deſcribed here. Thoſe are, 1. The toadflax-leaved, great Selago, which grows to two feet or more in length; and, 2. The American Selago, with reflex, denticulated leaves. 3. The large, Indian, fir-like Selago.

A Moſs, under the name of Selago, has been known in medicine, in the very earlieſt ages. Pliny tells us, that it was collected, with great ſuperſtition, for magical uſes; and that the fume of it was good for diſeaſes of the eyes. There appears great reaſon to believe, however, that not any of the plants we call Selago, at this time, but the Lycopodium ſabinæ facie, was the Selago of Pliny and the antients: they all agree in telling us, that it was like ſavin; and none of our ſpecies of Selago are at all like ſavin, though that lycopodium is.

Our common Selago of Wales is of a ſtrong taſte, and that of a very peculiar kind. It is ſometimes taken in decoction, by the country people, in their diſeaſes: it operates very violently, both by vomit and ſtool. They uſe a decoction of it alſo to kill lice. It is ſaid alſo to deſtroy worms in the bowels, and to promote the menſes. In Germany it is a common purge for horſes; and indeed, by the accounts handed down to us of it's operations, it ſeems a much properer medicine for horſes than for men.

MOSSES.

Claſs the Sixth. Genus the Ninth.

POLYCOCCA.

POLYCOCCA is a genus of Moſſes, conſiſting of branches furniſhed with leaves, and producing in the alæ of thoſe leaves capſules of a roundiſh figure, which, when ripe, open ſome into three, and ſome others into four valves, and contain accordingly either three or four regular ſeeds. Dillenius, from the reſemblance of this genus to the ſelago, calls it, Selaginoides; it ſeems more expreſſive of it's character to name it from the number of diviſions of it's ſeed-veſſel, and the number of ſeeds contained in it.

There is only one known ſpecies of this genus, which is the plant our botanical writers have called by the Engliſh name of Seeding-mountain Moſs.

POLYCOCCA.

This ſingular plant conſiſts of procumbent branches, divaricated in various manners, and taking root in ſeveral places, as they creep along. Theſe are covered with ſmall and ſhort leaves, placed alternately. They are of a pale green colour, broadeſt at the baſe, and terminate in a prickly point; they are rigid to the touch, ſomewhat hollowed at the baſe, and bent a little backwards; and, when nicely examined, their edges are ſeen to be beſet with the ſmall prickles, like thoſe of the points. The extremities of the branches are ſome of them ſlender; but others are thicker than the reſt of the plant, and form a kind of ſquammoſe and foliaceous heads: theſe, the ſucceeding year, grow larger, and produce ſeeds. At the time when they thus protuberate, there are no ſeeds, nor any thing of fructification viſible in them, but they are covered with leaves larger than the reſt, and, like thoſe of the ſeeding-ſhoots, are more hollowed than the reſt. Theſe ſeeding-ſhoots grow up in the manner of ſpikes, from the ſeveral parts of the branches; they are an inch or two long, and ſometimes more; and they are furniſhed with leaves reſembling thoſe of the branches, but larger, hollower, and more viſibly ſpinoſe; they are of a paler colour alſo, and are placed alternately at ſmall diſtances.

In the alæ of theſe leaves are placed the capſules; they are large, and ſtand upon no pedicles, and are tricoccous, or quadricoccous, each containing either three or four ſeeds of the ſize of poppy-ſeeds, and of a whitiſh colour.

This plant has been deſcribed by moſt of the late botanical writers. Merret calls it, Muſcus erectus polyſpermus. Ray, Muſcus terreſtris polyſpermos. Tournefort, Muſcus erectus, ſquammoſus, polyſpermos. Linnæus calls it, Lycopodium caule repente ramis ſpica foliis patula inſtructis.

It grows in wet places among ſtones, on the Welch mountains, and in ſome parts of Yorkſhire, as well as in Lapland, and moſt of the northern parts of the world. The capſules are produced in June, and remain on the plant till winter.

MOSSES.

Claſs the Sixth. Genus the Tenth.

OPECA.

OPECA is a genus of Moſſes, conſiſting of branches furniſhed with leaves, and producing in the alæ of the leaves capſules, which have no pedicles, nor any calyptræ, and which, when ripe, have ſeveral foramina in different parts of them, through which they diſcharge their contents.

There is only one known ſpecies of this genus.

OPECA.

This is a very beautiful Moſs; it grows to five or ſix inches in height. It's main ſtalk ſends off, on each ſide, ſeveral branches, which ſend off each ſeveral others; theſe

theſe ſtand alternately, and they, as well as the main ſtalk, are furniſhed with leaves ſet very thick, in an alternate order, oppoſite to one another. They are of a fine green colour, ſmooth on the ſurface, and pellucid; in ſhape broad, and obtuſe at the ends; they are ſo diſpoſed, that they give the branches a pennated appearance: they are convex on one ſide, and hollow on the other; and in this hollow part, near the inſertion of the branches, they contain capſules which are ſmall, of an oblong figure, and ſurrounded at the baſe by ſeveral little membranes. Theſe capſules are compoſed of a thin membrane, including ſix globular bodies, three on each ſide, and oppoſite to theſe as many foramina, or holes, out of which, when ripe, they diſcharge a fine powder.

It is a native of America; the only ſpecimens ever ſeen of it, in this part of the world, have been ſent by John Bartram, from Penſylvania. It's capſules are ripe in January. Dillenius has deſcribed it under the name of Porella; no other author has mentioned it.

MOSSES.

Claſs the Seventh.

Such as conſiſt of foliaceous matter, with evident fructifications ariſing from it.

Genus the Firſt.

MARCHANTIA.

MARCHANTIA is a genus of Moſſes, conſiſting of a congeries of foliaceous matter, on the ſeveral parts of which there are ſeparate male and female parts of fructification. The male flower is placed on a long erect pedicle, ariſing out of a kind of vagina. It's cup is a perianthium, large, flat, and divided into eight or ten equal ſegments, and contains under it as many flowers, as there are ſegments. The corolla is monopetalous, turbinated, and ſhorter than the cup. The ſtamen is a ſingle filament, undivided, and larger than the flower: the anthera is of an oval figure, and divides from the top into as many parts as there are ſegments in the cup: the farina is affixed to filaments. The female flower ſtands on the ſame plant, but does not riſe from the ſurface: it's calyx is a perianthium, conſiſting of one leaf of a membranaceous ſubſtance, permanent, and of the figure of a cup, or funnel, ſerrated round the edges, and divided into two cavities, by a membrane which runs acroſs it's middle; in the lower cavity of this cup there are contained ſeveral naked ſeeds, of a roundiſh, but compreſſed figure.

1. *Marchantia imbricata foliis brevibus.*
Short-leaved, imbricated Marchantia.

This ſpecies generally forms a cluſter of leaves of an irregular and indeterminate figure; the leaves are ſhort, moderately broad, and irregularly laciniated about the edges. They are of a duſky, diſagreeable, green colour, and do not ſhine as thoſe of ſome other of the ſpecies of this genus do. They have no viſible veins on the upper ſide, but they are very thick ſet with lanuginous fibres, which ſerve as roots on the under ſide. They generally grow a great number together, one falling over another. They are fixed down by the roots quite to the edges, and, when cloſely examined, they appear of a reticulated texture, and the areolæ between the reticulations punctated. The pedicles ſuſtaining the male flowers are about an inch long; the cup is divided into ten narrow, long ſegments. The female flowers are green, and of the ſhape of a hollow cone, with it's baſe upwards. The membrane covering the ſeeds breaks very ſoon in this ſpecies, ſo that the ſeeds are almoſt always viſible.

It grows by damp walls, and ſometimes about the ſtumps of trees in woods. It flowers in July and Auguſt. Dillenius deſcribes it under the name of Lichen domeſticus minor. Linnæus, by that of Marchantia calyce communi decempartito laciniis linearibus; and Micheli, under that of Marchantia capitulo ſtellato radiis teretibus.

2. *Marchantia foliis longioribus laciniatis.*
Long and jagged-leaved Marchantia.

The leaves of this ſpecies are often three or four inches long; they do not grow in imbricated tufts, as thoſe of the former, but ſpread themſelves irregularly about; they are from a third of an inch to an inch broad, and are deeply divided into ſegments. They are of a beautiful green colour, and have purple veins on their upper ſurface, and are reticulated; the ſpaces between the reticulations are of a figure, approaching to rhomboidal, and are not punctated, but plain; on the under part of the leaves there are lanuginous fibres, which faſten it down to the earth, ſtones, &c. but theſe do not reach quite to the extremities, ſo that the edges are looſe. The pedicles on which the male flowers grow are two inches or more in length; the perianthium is divided into ten or twelve ſegments. The female flowers are of a funnel-like ſhape, ſmall at the baſe, wide at the mouth, and dentated irregularly at the edges; every denticulation ends in a fine white hair. Theſe contain a number of ſeeds, covered at firſt with a membrane, but which ſoon diſappears. It grows in damp places by ditch-ſides, and in wells. The male flowers appear in May and June, the female ones in September; but they remain on the plant, till the male flowers of the next year appear. The botanical writers in general have deſcribed this, under the name of Lichen vulgaris, and Hepatica fontana. Micheli calls it, Marchantia major capſularum crenis in longiuſculum pilum deſinentibus.

There are three other ſpecies of the Marchanthia diſtinguiſhed by authors: 1. A broad, roundiſh-leaved one. 2. A very narrow, undulated-leaved Marchantia; and, 3. The dichotomous Marchanthia, with very broad, rounded ſegments.

Dillenius calls this and the two following genera by the common name Lichen; and Linnæus calls both thoſe, as well as this, Marchantia: we think we ſee ſufficient reaſons for ſeparating them. Micheli and Dillenius do not at all agree about their microſcopical obſervations on this genus: this is no place to enter into ſuch a controverſy; but there might, perhaps, be a way found of reconciling their different accounts, ſince there is no doubt of their being both ingenuous and candid writers. Much more than either of theſe authors have diſcovered, in regard to the other Moſſes, as well as to theſe, may be made out by good glaſſes, but not enough perfectly to explain them by has hitherto appeared.

MOSSES.

Claſs the Seventh. Genus the Second.

CONICEPHALA.

CONICEPHALA is a genus of Moſſes, conſiſting of a foliaceous matter, furniſhed with fructifications, or male and female flowers, ſometimes on the ſame plants, ſometimes on different plants of the ſame ſpecies. The male flower is ſupported on a long pedicle: it's calyx is a common perianthium, formed of five ſegments, which do not ſeparate, but compoſe together a kind of head of a conic figure, ſometimes more acute, ſometimes more obtuſe; this perianthium contains five flowers. The corolla is monopetalous, turbinated, and ſhorter than the cup: the ſtamen is ſingle, undivided, and is longer than the flower: the anthera is tumid, and oval, and opens from the top into five ſegments; the farina is lodged on filaments.

The female flower is compoſed of a perianthium, conſiſting of one piece, green, and not raiſed from the ſurface of the leaves; it is rounded below and flattiſh, and covered with little granules at the top, and is divided within into ſeveral cells, containing ſeeds of an elliptic figure. There is no corolla, nor any other viſible part of fructification.

1. *Conicephala*

1. *Conicephala longifolia capitulo acutiore.*
The long-leaved Conicephala, with a ſharp-pointed head.

This is a conſiderably large ſpecies; it's leaves are three inches, or more, in length, and from a third of an inch to half an inch in breadth; they creep on the ground, and are fixed to it by multitudes of fibrous roots. They are of a bright green colour, and of a fleſhy ſtructure; they are reticulated on the ſurface, and divided into a ſort of rhomboidal figures, which are punctated in a beautiful manner.

The male flowers grow on pedicles of an inch and half in length; the perianthium forms a conic head, ſharp-pointed, and moderately broad at the baſe.

The female flowers grow like warts, on various parts of the leaves; in other plants they are of about a ſeventh of an inch in diameter.

It grows in damp, ſhady places, in great abundance. It's male flowers appear in March, the female ones in June, or July, but they remain on the plants till that time the next year. Moſt of the botanical writers have called this Lichen pileatus, and Hepatica pileata. Micheli calls it, Hepatica vulgaris major; and Linnæus, Marchantia foliis dichotomis calyce communi quinquepartito. Dillenius deſcribes it under the name of Lichen vulgaris major pileatus et verrucoſus.

2. *Conicephala brevifolia capitulo obtuſiore.*
Short-leaved Conicephala, with obtuſe heads.

This is a much ſmaller ſpecies than the former. It's leaves ſeldom exceed an inch in length, and are not much divided, but ſinuated round the edges; they are of a dark green colour, and have no veins viſible on them: they are reticulated, as it were, or ſcaly, but not divided in a rhomboidal form; when abundant moiſture makes the leaves branch out, it is uſually in a dichotomous manner.

The pedicles which ſupport the male flowers are about an inch in height, and of a brown colour; the perianthium forms a head of an obtuſely conic figure; they are divided into five ſegments uſually, but ſometimes into four or ſix. The pedicle of theſe has no vagina at it's baſe. The female flowers are ſmall and warty; they are of a duſkier green colour than the leaves, and rough on the ſurface. The male flowers appear in April, the female ones in July, or Auguſt.

It is not unfrequent with us on the damp banks of ditches. Dillenius deſcribes this ſpecies under the name of Lichen pileatus parvus foliis crenatis. Linnæus calls it, Marchantia calyce communi, quinquifido, hemiſphærico; and Micheli, Hepatica media capitulo hemiſphærico.

3. *Conicephala anguſtifolia divaricata.*
Narrow-leaved, divaricated Conicephala.

This is an extreamly ſingular ſpecies. The leaves are an inch or two in length, and about a ſixth of an inch in breadth; of a deep green colour, and marked with a middle rib, very viſible all the way: they are variouſly divaricated in a dichotomous manner, and are not crenated at the edges. The extremities of them are cordated, or have a depreſſion or indenting in the middle, and from this indenting riſes the ſtalk, which ſupports the male flowers. This is about an inch high, moderately thick, and of a browniſh colour. The head, formed by the common perianthium, is ſomewhat obtuſe, though leſs ſo than in the laſt ſpecies. The female flowers are large, oblong, thick, and rough at the top.

It is a very rare ſpecies with us. I once found it on the boards behind a water-mill in Buckinghamſhire, and once near Mount-ſorrel in Leiceſterſhire. Micheli has deſcribed it under the name of Hepatica minor anguſtifolia capitulo hemiſphærico.

The female flowers, in this ſpecies, are ſometimes on the ſame plants with the male, ſometimes on different ones.

Micheli does not allow the elliptical bodies contained in the female flowers of the Conicephala, or hepatica, as he calls it, to be ſeeds. We do not certainly know, indeed, that what we call ſeeds in any of the plants of this claſs are truly ſo.

MOSSES.

MOSSES.

Class the Seventh. Genus the Third.

SELENIA.

SELENIA is a genus of Mosses, consisting of a foliaceous matter, and exhibiting male and female organs of fructification on different parts of the same plant.

The male flowers stand on long pedicles, which grow from vaginæ on the leaves of the plant. The cup is a common perianthium, consisting of four segments, disposed in a cruciform manner, when ripe, and containing four flowers. The stamen is a single filament, undivided and longer than the corolla, which is monopetalous, turbinated, and shorter than the cup. The anthera, on the head of the stamen, opens into four segments, and discharges a farina affixed to fine filaments.

The female flower is composed of a perianthium without a corolla; this is monopetalous, and undivided, and is affixed to the leaves in form of a crescent; in the hollow of this there are lodged a number of green, roundish, flatted seeds.

Dillenius blends this genus with the two former, under the common name Lichen, as does also Linnæus, under that of Marchantia. Micheli separates them, and calls this Lunularia, a word too nearly like the Lunaria, a name of a different plant in sound. There is only one known species of this genus.

SELENIA.

This is a small, but very beautiful plant. It generally grows in considerable quantities together, and it's leaves lie in an imbricated manner over one another. They are from half an inch to an inch in length, and near half an inch in breadth; sometimes simple, sometimes divided into three or four lobes. They are moderately thick, not pellucid, and of a tolerably bright green colour. There are no veins discernible in them, but they look, as it were, squammose; on the under side there are fine lanuginous roots, of a whitish colour, disposed in a row along the middle of every leaf: and sometimes in ramifications from that; from the middle of the leaves arise the pedicles that support the male flowers; they are about three quarters of an inch in length, and moderately thick. The segments of the perianthium are hollow. The female flowers or lunules are found on different parts of the plant, and that in great number, each containing a large quantity of seeds.

This plant is frequent about London on old walls, and in other damp places. It flowers in July and August. Dillenius has described it under the name of Lichen seminifer, lunatus, florifer, pileatus, tandem cruciatus. Micheli, under that of Lunularia vulgaris. Linnæus, under that of Marchantia calyce communi quadripartito laciniis tubulosis. Other of the botanical writers have called it, Lichen seminifer parvus, and Lichen petræus acaulos.

MOSSES.

Class the Seventh. Genus the Fourth.

JUNGERMANNIA.

JUNGERMANNIA is a genus of Mosses, consisting usually of stalks furnished with leaves, disposed in a pennated or squammose manner; sometimes of leaves only; and producing visible male and female parts of fructification.

The male flower stands on a long strait pedicle, which arises out of a vagina, growing from the upper part of the surface; it has neither calyx, nor corolla, but consists only of an anthera, which is at first of an oval figure, but afterwards opens into four segments, and remains in this state a long while on the plant.

The

The female flower has no pedicle, but ſtands ſometimes on the ſame plant, ſometimes on another of the ſame ſpecies; on the extremities of the branches of the plant, or on other parts of it. There is no calyx or corolla viſible, but all that is ſeen is a number of ſeeds lying naked in a cluſter, ſometimes only a ſingle one.

Dillenius has given this genus of Moſſes the name of Lichenaſtrum. Linnæus and Micheli call it, Jungermannia; but the latter has deſcribed and figured ſome of it's ſpecies, under the name of Muſcoides, and others under that of Marſilea.

1. *Jungermannia pennata vagina dentata.*
Pennated Jungermannia, with a dentated vagina.

This is a very elegant little plant. It grows to two or three inches in length; it's branches are ſometimes ſimple, ſometimes divaricated; they are beſet on each ſide with a row of fine, pellucid, bright green leaves, broad and obtuſely pointed. The branches, thus pennated, ſomewhat reſemble thoſe of the trichomanes. The pedicles which produce the male flowers are about an inch long; they ariſe out of oblong vaginæ, dentated at the edge, and placed ſometimes in the middle, ſometimes near the baſe of the plant. The anthera is round at firſt, but divides into four parts. The ſeeds are numerous, and very ſmall, and are diſperſed over ſeveral parts of the plant, but principally about the ends of the branches.

It is found in our woods among the other Moſſes, about the ſtumps of old trees; it flowers in April and May. Dillenius calls it, Lichenaſtrum trichomanis folio e baſi et medio florens.

2. *Jungermannia divaricata pediculis brevibus.*
Divaricated Jungermannia, with ſhort pedicles.

This is a very ſingular plant. It grows to two or three inches in length, and often ſpreads to near as much in breadth. It grows from it's baſe with a ſingle ſtalk, of the thickneſs of a ſmall twine, but not round; this ſends off a number of branches, and thoſe afford yet others, and towards the extremity the main ſtalk itſelf divides into ſeveral portions, all branched. The ſtalks are all covered with hollow leaves, in a double ſeries, the upper larger than the under, and of a ſomewhat triangular figure; they are green at firſt, but afterwards become of a purpliſh brown. The whole plant hangs looſe from the thing it grows on, and, at the extremities of it's ſeveral ramifications, produces oblong vaginæ of a ſquare figure, and divided at the top into four ſegments; from theſe ariſe ſhort pedicles, ſcarce a fifth of an inch long, beyond the vagina, and on the heads of theſe ſtand the antheræ, one on each; they are tumid and roundiſh, and finally burſt into four ſegments: the ſeeds lie in cluſters at the extremities of the branches.

It grows on rocks, and on the trunks of old trees in our woods: it is plentiful enough about London. Dillenius has deſcribed it under the name of Lichenaſtrum imbricatum tamariſci Narbonenſis facie. Linnæus calls it, Jungermannia foliis imbricatis ſerie duplici, ſuperioribus, ſubrotundis, majoribus, convexis, obtuſis, majoribus.

3. *Jungermania folioſa pediculis longiſſimis.*
The leafy Jungermannia, with very long pedicles.

This ſpecies differs extreamly from the two former, in that it is not compoſed of branches furniſhed with leaves, but of leaves only, and much reſembles the ſelenia in figure. It generally grows ſingle. It's leaf is about an inch long, and half an inch or leſs broad, ſinuated at the edge, and uſually divided into two or three lobes. It is of a bright green colour, and is affixed to the ground by a ſeries of roots running all along it's under part; when not in a flowering ſtate, it would never be ſuſpected for a Jungermannia: from the middle of the leaf ariſes a ſhort dentated vagina, and from this a very long pedicle, on the ſummit of which appears the anthera, roundiſh at firſt, but afterwards dividing into four ſegments.

It is not uncommon about the banks of rivers, and in other moiſt places. It flowers in March and April. Dillenius has deſcribed it under the name of Lichenaſtrum capitulis rotundis è foliorum medio enaſcentibus; and Micheli, under that of Marſilea major, atrovirens, floribus albicantibus è foliorum medio enatis.

4. *Jungermannia folioſa divaricata vagina globoſa.*
Divaricated, folioſe Jugermannia, with a globoſe vagina.

This is a very ſmall, but a very beautiful ſpecies. It conſiſts of a ſingle leaf of about an inch long, and a third of an inch broad, and ſo divaricated, that it extends often as far in it's whole diameter, as in it's length. It is of a beautiful pale green colour, very thin, and ſomewhat pellucid; it's ſeveral ſegments are not ſinuated at the edges, and they terminate in obtuſe points. They have a rib running all along the ſegments, and ſometimes they grow in cluſters, though more uſually ſingly; on the lower part of the middle ribs of theſe leaves there ſtand vaginæ, of a very peculiar ſtructure; they are globoſe, hairy, and ſucculent; from theſe there grow pedicles of about an inch long, which ſuſtain each it's anthera, which is ſmall, roundiſh, and of a browniſh-red colour, and ſoon after it's appearance divides into four ſegments. The ſeeds, both in this and the former ſpecies, are very ſmall, and are placed in cluſters toward the edges of the leaves.

This grows about the ſtumps of old trees in Hornſey-wood, and ſome other places about London. It flowers in April. Dillenius has deſcribed it under the name of Lichenaſtrum tenuifolium furcatum thecis globoſis piloſis. Vaillant calls it, Hepatica arborea globuligera; and Micheli, Marſilea minima, anguſtifolia, floribus ex inferiori foliorum parte e ſubhirſuta et turbinata vagina erumpentibus.

It is to be obſerved, that Micheli makes all the much-branched Jungermanniæ Muſcoides, and all the folioſe ones Marſileæ. The more ſingular ſpecies of Jungermannia, beſide thoſe deſcribed here, are, 1. The purple, hollow-leaved Jungermannia. 2. The ſcorpion-tail'd kind, with fimbriated leaves. 3. The fine, fern-like kind. 4. The rounder-leaved, arbor vitæ-like kind. 5. The woolly, fern-like Jungermannia. 6. The round-ſtalked, purple Jungermannia. 7. The jagged Jungermannia, with long vaginæ. 8. The multifid, folioſe Jungermannia. 9. The little areolar Jungermannia.

MOSSES.

Claſs the Seventh. Genus the Fifth.

ANTHOCEROS.

ANTHOCEROS is a genus of Moſſes, conſiſting of a foliaceous matter, extended on the ground, and producing male and female fructifications; the former very evident.

The male flower riſes immediately from the plant, without a pedicle: it conſiſts of a monophyllous calyx, of a cylindric figure, with an undivided edge; there is no corolla, nor even ſtamen, but a ſingle anthera of a very ſingular form ariſes. From the baſe of every cup, this is very long, ſlender, tubulated, and compoſed of two valves, between which is a capillary filament, covered with farina.

The female flower is ſometimes on the ſame, ſometimes on a different plant. It grows to the leaf without any pedicle, and is monophyllous, and divided into ſix ſegments, and contains three ſeeds lodged in it's bottom.

There is not, however, an abſolute certainty, as to the number of the ſeeds, or of the ſegments of the cup: ſometimes there are only two ſeeds, ſometimes only one, and the number of ſegments is in proportion.

1. *Anthoceros foliis magis laciniatis.*
The more jagged-leaved Anthoceros.

This ſpecies appears, firſt, in form of a cluſter of ſmall green leaves, growing together in a circular, or nearly circular, form, and of the diameter of half an inch, or an inch; the leaves are ſeparately of an irregularly oblong figure, rounded at the ends, and ſinuated both there and at the ſides: they are very thin, of a gloſſy ſurface, and ſomewhat pellucid. From ſeveral parts of the ſurfaces of theſe leaves,

there

there riſe vaginæ of an oblong figure, and out of theſe there grow certain oblong bodies, one from each; theſe are at firſt as fine as hairs, but they afterwards grow thicker, and to two or three inches in length; theſe, when ripe, ſplit from the top half-way down, and appear to be antheræ, loaded with a yellow farina. Sometimes on the ſame plant, and ſometimes on others which do not produce theſe antheræ, there appear in ſeveral parts of the leaves little prominences like warts, which, when ripe, open into ſix parts, and ſhew that they are the female flowers, containing each three ſeeds. This fructification is very ſmall, and it requires a microſcope to diſtinguiſh it well; when thus examined, ſix is the uſual number of the ſegments, and three of the ſeeds, but it is not certain. It flowers in April. It is found in damp places, and by way-ſides, in many parts of England. I have met with it about Mendip-hills in great abundance. The flowers appear in April, and are ripe in June. It has been deſcribed by Merret, under the name of Lichen capillaceus ex plurimis capillamentis nigricantibus conſtans, a ſtrangely wild and imperfect name. In the third edition of Ray's Synopſis it is called, Lichenaſtrum gramineo pediculo et capitulo oblongo bifurco. Micheli calls it, Anthoceros minor foliis magis crenatis ſubtus incurvatis; and Dillenius, Anthoceros foliis minoribus magis laciniatis.

2. *Anthoceros foliis minus laciniatis.*
The leſs jagged-leaved Anthoceros.

This ſpecies makes it's firſt appearance with two, three, or four leaves together, which do not form a tuft, as thoſe of the other, but ſcatter ſeveral ways; they are near an inch long, about a third of an inch broad, and ſlightly ſinuated about the edges; they are very thin and tranſparent, and of a bright green colour. From the ſeveral parts of theſe leaves ariſe vaginæ, ſmall at the leaf, and ſomewhat undulated about the rim; from theſe there grow antheræ of an inch and half in length, which burſt open, when ripe, and ſhed a greeniſh-yellow farina. On other plants of the ſame ſpecies, never on the ſame individual, ſo far as I could obſerve, there grow ſmall protuberances like warts, which open into an uncertain number of ſegments, and contain one, two, or three ſeeds.

I found this ſpecies abundantly at the foot of an old wall, by the road to Shepton Mallet in Somerſetſhire. It flowers in May and June.

Micheli deſcribes it under the name of Anthoceros major; and Buxbaum, under that of Lichen hepaticus pediculis gramineis.

There are three other ſpecies referred to this genus by authors. 1. The narrow-leaved Anthoceros, with a ſhort flower. 2. The Anthoceros, with a finely divided leaf; and, 3. The thick-headed, ſhort Anthoceros. None of theſe have been found in England.

M O S S E S.

Claſs the Seventh. Genus the Sixth.

RICCIA.

RICCIA is a genus of Moſſes, conſiſting of a foliaceous matter, procumbent on the ground, on which there are evident male and female fructifications, ſometimes both on the ſame, ſometimes on different plants of the ſame ſpecies.

The male flower has neither calyx nor corolla, but conſiſts of a ſingle anthera, of an oblong, tubulated form, which grows to the leaves without any pedicle, and opens from the point, to diſcharge a fine greeniſh farina.

The female flower has no corolla, and ſcarce any calyx; it conſiſts principally of a pericarpium of a globular figure, in which there are contained a number of ſeeds. The male flowers in this genus grow in ſome ſpecies from the middle rib of the leaf, in others on other parts of the ſuperficies, but uſually in a double row. The female flowers in ſome are placed in the chinks, and ſtellated ſcrobiculæ on the leaves, and riſe above the ſurface; in others they are contained within the very ſubſtance of the leaves, and are not viſible till the outer membrane of them is decayed. The pericar-

pium

pium does not naturally burſt open in any of them, but the rain diſſolves the texture of it, and the ſeeds are then diſcharged.

1. *Riccia latifolia fructu aſpero.*
Broad-leaved Riccia, with a rough fruit.

This is a very beautiful little plant, and has much the appearance of ſome of the marchantias. It conſiſts of a ſingle leaf, which generally ſends out four, five, or ſix divarications from the ſame baſe: theſe extend themſelves in a circular form, and are fixed down to the ground by roots, ſent all along from the middle rib; they are each about an inch long, and, in the broadeſt part, about a third of an inch in breadth. They are narroweſt near the baſe, and, at about half their length, they divide into two ramifications, which uſually ſubdivide again, or, at leaſt, are dented at the end in a ſort of fiſſure, and are of a pale green, and of a kind of teſſelated appearance; at the middle rib there ſtand two rows of ſhort, green, erect antheræ, and, in other parts of the leaves of the ſame plant, are placed the fruit, which are roundiſh in figure, and ſomewhat rough on the ſurface, and very ſmall, but prominent, above the ſurface of the leaves.

It is a very ſcarce plant; I have only found it once, which was in a damp lane near Soiſton in Lincolnſhire: it was in flower in the end of April. It is very remarkable of this plant, that it has a ſomewhat aromatic taſte, like coriander ſeeds. Doody has mentioned it, in Ray's Synopſis, under the name of Lichen verrucoſus; but no other author has given us any account of it, except this and Micheli, who calls it Riccia major, coriandri ſapore, foliorum ſuperficie velut teſſelata, fructu aſpero.

2. *Riccia obtuſifolia pinguis.*
Flat, blunt-leaved Riccia.

This is a much ſmaller plant than the former; it never extends to more than three quarters of an inch in it's full diameter. It grows in a kind of irregularly circular figure, divaricating from the ſame baſe into five or ſix parts, which are ſhort, and broadeſt at the extremity, where they are a little ſinuated. They are of a dead green colour, thick and fatty to the touch, and moiſt on the ſurface. From the middle of each divarication, or leaf, there grows a double row of antheræ, or male flowers: they are ſhort, and obtuſe at the point, and in the very ſubſtance of other plants of the ſame ſpecies, never of the ſame, ſo far as I could obſerve, there grow roundiſh and ſmooth capſules, containing a vaſt quantity of minute ſeeds. It grows in damp places in woods, and under hedges, and flowers in February. Micheli calls it, Riccia minor, latifolia, pinguis, aſpergine cryſtallina perfuſa.

3. *Riccia foliis laciniatis.*
Jagged-leaved Riccia.

This little plant ſeldom exceeds a third of an inch in diameter, though it grows in a kind of circular form. It expands from the ſame baſe into four or five divarications, which are all of them ramified into five or ſix parts, ſomewhat in the manner of a ſtag's-horn; the extremities are ſharp-pointed. The leaves are of a deep green colour, gloſſy on the ſurface, and ſomewhat ſucculent. From their middle there riſes a double row of antheræ, which are very ſhort, of a browner colour than the leaves, and blunt at the ends: they ſplit after a certain time. The female flowers ſeem of the nature of thoſe which are buried within the ſubſtance of the leaves: on preſſing the plant gently between the fingers, there are felt little granules, harder than the reſt, which are probably the fruit, but a microſcope makes them out but very imperfectly.

The plant is frequent on Hampſtead-heath, on Blackheath, and about Putney, but it is ſo ſmall that it muſt be carefully looked after. It flowers in April. Dillenius has deſcribed it under the name of Lichen omnium minimus foliolis ſciſſis ſuper terram expanſis. Micheli calls it, Riccia minima, nitida, ſegmentis anguſtis acutis.

The other ſpecies of Riccia are, 1. A large Riccia, with ſmooth, pyramidal fruit. 2. The blue-green, deep-cut Riccia. 3. The laciniated Riccia, with hairy edges. 4. The narrow-leaved, greyiſh, thick Riccia. 5. The ſmall Riccia, with blunt ſegments.

MOSSES.

MOSSES.

Class the Seventh Genus the Seventh.

TARGIONIA.

TARGIONIA is a genus of Mosses, consisting of foliaceous matter, and producing distinct male and female flowers on the same plants. The male flower has no corolla; the calyx is monophylolus, and divided into two parts, resembling two valves, convex on the outside, and concave within, and adhering to the plant without a pedicle. In this is placed on a short stamen a single anthera, of a tumid, roundish figure, dentated at the top, and filled with a yellowish farina, adhering to fine filaments. The female flower has neither calyx nor corolla visible, but is a roundish, tumid pericarpium, containing a number of cells, and in each of these an oval seed. These grow on the sides of the leaves, the male flowers on the tops. There is only one species of this genus known: this is the

Targionia foliis oblongis.
The oblong-leaved Targionia.

This is a very small, as well as a very singular, plant. It consists of a single leaf, which is of an oblong figure, narrow at the base, and growing gradually broader to the extremity, where it is indented in form of a heart. The whole leaf is scarce half an inch long. It has a multitude of little fibres near the base, which serve it as roots; it's upper end is loose. The whole leaf is of a dusky green colour, and not pellucid, but it is dotted all over, as it were, with white; when fully grown, it often becomes throughout of a purplish colour. At the extremity of the leaf, in the very indenting just mentioned, there grows a bivalve calyx, of considerable size in proportion to the plant, in which is the single anthera, on it's short stamen, full of the farina. On the sides of the leaves, and on their lower part, there grow certain wart-like bodies, roundish, tumid, and somewhat rough on the surface. These are the pericarpia, containing the seeds of the plant, in several distinct cells, but so small, that it requires a good microscope to distinguish them.

It is not a native of England. Micheli says it is common in Italy. I have received fine specimens of it from Bagneres in France, from which I have made out the characters, especially of the female fructification: if I had had the recent plant, perhaps, they had been more perfect.

Dillenius calls this, from C. Bauhine, Lichen petræus minimus fructu orobi. Columna, who first discovered it, calls it, Lichen acaulos hypophyllocarpus. Buxbaum calls it, Lichen terrestris minor seminifer; and Micheli, Targionia minima vulgaris. The several authors, who have described this plant, have had very different opinions, as to it's fructifications. Micheli will not allow the protuberances on the sides of the plant to be the fruit, but he has allowed bodies of the very same figure and structure to be fruits in other cases.

MOSSES.

Class the Seventh. Genus the Eighth.

SPHÆROCARPUS.

SPHÆROCARPUS is a genus of Mosses, consisting of foliaceous matter, expanded on the ground, and producing very large and obvious fructifications.

It is probable that the male flowers are produced on separate plants from the female, and have not been discovered to belong to the same species; no male parts of fructification are described to us, and the plant is not at hand for our examination. The female parts consist of a tubulated and inflated vagina, within which is contained a large globular capsule, containing a great number of small, loose seeds.

There is only one ſpecies of this genus known.

Sphærocarpus.

The firſt appearance this plant makes is in form of a foliaceous cruſt, of an indeterminate figure, which extends itſelf to an inch, or more, in diameter, and is variouſly undulated at the edges; this is of a duſky colour, but of a tolerably ſmooth ſurface, and is fixed down to the ground by a multitude of fibrous roots. On it's ſurface there appear, in cluſters, a kind of inflated vaginæ; they are about a ſixth of an inch in length, and are narrow at the baſe, wide near the upper part, but again contracted into a narrow mouth: theſe do not naturally open, but rot away, and ſo let looſe the fruit to rot in it's turn, and let out the ſeed; but, if cut open, there is found, near their baſe, a round body, conſiderably large in proportion to the plant, which, when opened, is found full of ſmooth granules.

Dillenius quarrels with Micheli for taking theſe for ſeeds, and rather ſuppoſes them to be globules of farina, and the globule containing them an anthera; but he is certainly wrong in this; the farina of all theſe plants is affixed to filaments, theſe globules are perfectly looſe.

The plant is not of Engliſh growth, but is frequent in Italy, in garden-walks, and in damp places. It flowers in April.

Theſe are the genera and more ſingular ſpecies of Moſſes known. If we have omitted the naming ſome which make a figure in the works of authors, it has been owing to our having diſcovered them, however pompouſly figured, not to be diſtinct ſpecies, but mere varieties of other ſpecies, named as ſuch in their places.

We ſhould not paſs over in ſilence our having omitted one of Linnæus's genera of Moſſes, the blaſia; that author took the account of the genus from Micheli, who had but imperfectly examined what he declares to be the only ſpecies of it; and Dillenius has, by a very accurate enquiry into it's nature and characters, juſtly determined it to be a ſpecies of mnium; as ſuch, it is mentioned in our liſt of the ſpecies of that genus, affixed to our deſcription.

THE

THE HISTORY OF PLANTS.

PART II.

CRYPTOGAMIA.

Plants of, or approaching to, the figure of what are called the more perfect ones, but whoſe parts of fructification are not diſtinct or obvious.

SALVINIA.

SALVINIA is a genus of plants, producing ſeparate male and female flowers, on the different parts of the ſame individual.

The male flowers are very numerous, and ſtand on the ſurface of the leaves. They have neither calyx nor corolla, but conſiſt of an obtuſely conic body, ſupplying the place of a filament, on which there are placed four antheræ: theſe are erect, oblong, and ſlender, pointed at the end, and twiſted ſpirally all the way up.

The female flower has neither cup nor corolla. The fruit is of a roundiſh figure, and contains four diſtinct cells, in each of which are contained ſeveral roundiſh ſeeds.

Linnæus calls this genus *Marſilea*; but, that being a name already given by Micheli to another very different genus of plants, we have thought it more proper to retain to this genus the original name *Salvinia*, given it by the ſame Micheli.

This genus comprehends the Salvinia of Micheli, and the Pilularia of Dillenius.

1. *Salvinia foliis brevibus obtuſis.*
Short, obtuſe-leaved Salvinia.

The root of this ſpecies is fibrous, and the fibres hairy; the ſtalks are ſimple, and about four or five inches long: they are round, hairy, and ſolid. The leaves ſtand in pairs; they are oblong, very broad, and obtuſely pointed; their pedicles are very ſhort and thick, and, from the ſame part of the ſtalk whence every pair of leaves iſſues, there alſo proceeds a cluſter of roots adhering to an oblong head.

The leaves are even at the edges, ſomewhat cordated at the baſe, and of a bright green colour. Their ſurface appears punctated from the frequency of the male flowers.

Theſe

Theſe ſtand in rows very near one another, proceeding from the middle rib to the edge. Each way there are twenty, or more, of theſe rows on every leaf, on each ſide the rib. The fruit grows in a very different place; it adheres to the lower end of the head of every cluſter of roots, and is every way ſurrounded and covered by the fibres.

It is an aquatic plant, and is very common in brooks, ditches, and ponds about Piſa, in the Auxerre, about the foot of mount St Julian, and in many other places; but we have it not in England: it floats upon the water. It has been long known among the botanical writers, tho', till Micheli, nobody was at the pains to find out it's fructification. C. Bauhine calls it, Lenticula paluſtris, latifolia, punctata. J. Bauhine, Lens paluſtris Patavina.

2. *Salvinia foliis junceis.* Pepper Graſs.
The ruſh-leaved Salvinia.

This ſpecies does not at all reſemble the former in it's external figure. It ſends out long, ſimple, round flagellæ, of the thickneſs of a ſmall packthread, which creep along the ſurface of the ground; theſe are five or ſix inches long; at every inch, or thereabout, there is ſent downwards a root, conſiſting of three or four ſimple fibres, and from the ſame part of the flagellum upward as many leaves. The leaves ſtand erect, and are two, three, or four inches long; they are round like ruſhes, and of the thickneſs of a ſmall packthread, largeſt at the leaf, and gradually ſmaller, till they terminate in a point.

In the alæ of theſe leaves ſtand the capſules; they are affixed to the flagellum by very ſhort pedicles, and are at firſt oblong, afterwards more tumid and rounder; they are covered with a brown, hairy membrane: when cut aſunder, they ſhew four cells; but, if ſuffered to grow to the full maturity, they ſeparate into four parts, in each of which are contained a great number of ſmall, roundiſh ſeeds.

This ſpecies grows in marſhy grounds, and is not uncommon with us, but it's reſemblance to graſs makes us overlook it. It is common on Hounſlow-heath, and in many parts of Surry and Suſſex. Vaillant and Dillenius call it, Pilularia. Ray, Graminifolia paluſtris, repens, vaſculis granorum piperis æmulis. Merret, Gramen piperinum. Plukenet calls it, Muſcus aureus, capillaris, paluſtris, folliculis rotundis quadripartitis.

LEMNA.

LEMNA is a genus of plants, producing diſtinct hermaphrodite and female flowers, on the ſame plant. In the hermaphrodite flowers the calyx is monophyllous, and of a roundiſh figure, and opens ſidewiſe; it is dilated obliquely outwards, and is large, expanded, obtuſe, and not divided at the edges. There is no corolla, but in this calyx there ſtand two ſubulated, crooked filaments, of the length of the cup, and on theſe double globoſe antheræ. In the female flower there is no corolla; the calyx is the ſame as in the other. The germen of the piſtil is of an oval form; the ſtyle is ſhort and permanent, the ſtigma ſimple. The fruit is a capſule rounded, but terminating in a point, and contains only a ſingle cavity; in this are lodged a ſmall number of ſeeds of an oblong figure, pointed at each end, and ſtriated on one ſide.

This genus comprehends the Lenticula of Dillenius, &c. and the Hydrophace of Buxbaum.

1. *Lemna folio ſubrotundo monorrhiza.* Duckweed.
The roundiſh-leaved, ſingle-rooted Lemna.

This is the ſpecies of Lemna moſt frequent in our ſtanding waters, and often covers them entirely. It's leaves are of an irregularly rounded figure, and of about a ſixth of an inch in diameter. Each plant properly conſiſts of a ſingle leaf, from the center, or near the center, of which deſcends a ſingle fibre, by way of root. The leaf is green on both the upper and under ſides. The hermaphrodite flower is produced from one ſide of the leaf; the female flower, from the oppoſite part on the other ſide. Both flowers are of a whitiſh green in colour, but the calyx does not remain long to either; ſo that it is more uſual to ſee only the ſtamina and piſtil. The root is

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an inch and half in length, and at it's bottom has a conic caſe, which falls off, as it grows old or decays. This ſpecies flowers in June, and it is at that time only that the flowers are to be expected to be ſeen perfect: the ſtamina and piſtil remain, indeed, till the end of July; and the ſeed-veſſel may be found till winter. A thouſand places may be ſearched, before a ſingle plant of this is found in flower; but the moſt probable for it's flowering are, where there is moſt ſun, and greateſt plenty of water. The botanical writers have deſcribed this under the names of Lens paluſtris, and Lenticula paluſtris vulgaris.

2. *Lemna folio oblongo monorrhiza.*
The oblong-leaved Lemna, with a ſingle root.

This conſiſts of a ſingle leaf, and ſingle root, as the former. The leaf is of an oblong figure, obtuſe at each end, and broadeſt near the middle; it is moderately thick, and ſomething larger than the leaf of the former ſpecies, or at leaſt it is full as broad, with more length; it is of a pale green, both on the upper and under ſides. The root proceeds from nearly the middle of the leaf, and is a ſingle white fibre, of two inches and a half, or more, in length, covered, at it's extremity, with a conic caſe as the others.

This is leſs frequent than the former ſpecies. I have met with it plentifully in Wiltſhire. It's flowers are as in the former. Matthiolus has a figure of it, but without a diſtinct name. Micheli calls it, Lenticularia media, monorrhiza, foliis oblongis utrinque viridibus.

3. *Lemna foliis latis ovatis polyrrhiza.*
The many-rooted, broad, oval-leaved Lemna.

This is the largeſt of all the ſimple Lemnæ. It's leaf is twice or three times as large as that of the common Lemna, of an oval or pear-faſhioned ſhape, very large, and broad at one end, and ſmall at the other; it is conſiderably thick, and of a bright green colour on the upper ſide, and of a fine purple underneath. Every leaf has, inſtead of a ſingle fibre, by way of root, ten, twelve, or more, but they are ſhort, ſeldom exceeding an inch in length: each of them has it's conic caſe at the end, and they all riſe near one another, and that nearly in the middle of the leaf.

This ſpecies is very common in our ſtanding waters, with the ordinary Lemna. It's flowers are produced from the two ſides of the ſmaller part of the leaf, near the extremity. Commelin calls this ſpecies Lenticula paluſtris major. J Bauhine, Lens paluſtris, ſuperne virens, inferne nigricans; his deſcription only is to be regarded, however, for the figure does not expreſs it.

4. *Lemna folio ovato monorrhiza.*
The ſingle-rooted, oval-leaved Lemna.

The leaf of this ſpecies is exactly of the ſhape of that of the former, very large and rounded at one end, and very ſmall, but rounded alſo, at the other; there is alſo a ſort of neck between the two parts, ſomewhat diſtinguiſhable in the former, but more ſo in this. This is of a pale green on the upper ſide, and of a yet paler or whitiſh green on the lower; very thick and fleſhy; more ſo, indeed, than any other ſpecies, and very prominent on the under ſide: from the center of this leaf iſſues a ſingle fibre, longer than that of any other ſpecies; three inches is a common length, ſometimes it is much more. This ſpecies is leſs frequent than the others, but it flowers more conſtantly than any of them. I have obſerved it in the ponds on Putney-heath, where it is common to find it in flower in July. It is deſcribed, in the Flora Altdorffenſis, under the name of Lenticula aquatica foliis minoribus inferna parte in veſiculam ductis. Micheli calls it, Lenticula paluſtris major, inferne magis convexa, fructu polyſpermo.

5. *Lemna folio ovato arrhiza.*
The oval-leaved Lemna, with no root.

This is the ſmalleſt of all the Lemnæ; it floats on ſhallow waters, and conſiſts of a ſingle leaf, not exceeding the ſize of the head of a large pin, but of an oblong oval figure. It is ſomewhat convex on the under ſide, and whitiſh; on the upper ſide it is of a pale green. The flowers are produced from the oppoſite ſides of the ſmaller end of the leaf, and, from the oppoſite end, there frequently grows a ſingle new plant; this is ſo fixed to the old one, that it leaves a hole in it on ſeparating. This ſpecies is common on ſtanding waters, in the fens in Lincolnſhire. Micheli calls it, Lenticularia omnium minima arrhiza.

6. *Lemna pediculata ramoſa foliis oblongis.*
The ramoſe, pediculated Lemna, with oblong leaves.

This is ſo different in it's appearance from the other Lemnæ, that nothing but a careful examination can inſtruct people that it belongs to the ſame genus; the others all float looſe upon the water, this is originally rooted in the mud, though it can ſupport itſelf very well looſe too. It riſes with a ſingle, round, ſmooth ſtalk. At the height of an inch, or ſomewhat more, from the baſe, this produces a ſingle leaf, and, from the origin of that leaf, it divides itſelf into two parts: each of theſe, at the diſtance of half an inch, produces it's leaf, and divides again, and ſo on; ſo that, from one ſtem, a cluſter of a hundred, or more, ramifications is ſoon formed. Though the leaves which ſtand at the diviſions of the branches are ſingle, at the extremities it is always otherwiſe; there are there always three leaves, growing together in an odd manner, two growing from the lower part of the principal leaf, and making, with it and it's pedicle, a kind of a figure of a croſs. The leaves are about a third of an inch in length, and half as much in breadth, and of a pale green. From all parts of the plant there are ſent down roots, perfectly like thoſe of the other Lemnæ; they are ſingle, very ſlender filaments, white, hollow, and covered with the ſame kind of conic caſe, at the extremity, as thoſe of the other Lemnæ.

This ſingular ſpecies is not uncommon about London, in little ponds. I have found it abundantly in one by the ſide of the common foot-way to Hampſtead. C. Bauhine calls it, Lenticula aquatica triſulca; Lobel, Hederula aquatica.

Beſide theſe ſix diſtinct ſpecies of the Lemna, there are two varieties which have ſo ſingular an appearance, that they may eaſily be miſtaken for diſtinct ſpecies alſo: theſe are a very ſmall, oblong, and thick-leaved kind, and a larger, roundiſh, and thin-leaved one. The firſt of theſe is a variety of the Lemna folio oblongo monorrhiza, owing to too much ſun and too little water: the other, of the Lemna folio ovata monorrhiza, owing to too much ſhade. Micheli mentions them as diſtinct ſpecies; he calls the firſt Lenticula paluſtris, minima, atrovirens, utrinque pene convexa; and the other, Lenticula paluſtris, media, pallide virens, inferne minus convexa, radicibus longiſſimis, fructu diſpermo. The number of ſeeds in the capſules of this genus is unlimited, and varies occaſionally in the different plants of the ſame ſpecies; all the reſt of the difference is owing to the different degree of ſhade and ſunſhine, and different quantity of water.

The common Lemna is recommended, by many authors, as a refrigerant and aſtringent. Bates tells us, alſo, of a wonderful cure performed by an infuſion of it in wine, in an obſtinate jaundice.

CHARA.

CHARA is a genus of plants, with hermophrodite flowers. The calyx is very ſmall, and compoſed of two leaves: there is no corolla, nor any filament, but a ſingle anthera, of a globoſe figure, is affixed to the receptacle. The germen of the piſtil is oval; there is no ſtyle, but there are three broad ſtigmata. The ſeed is ſingle, and of an oblong oval figure.

Dillenius has called this genus *Hippuris*; others have confounded the ſpecies of it with the equiſeta, or horſetails. Vaillant firſt deſcribed it's characters, but not exactly as they are found: he mentions a monopetalous corolla, and a capſular pericarpium; Linnæus does not allow them.

1. *Chara*

1. *Chara caulibus lævibus.*
The ſmooth-ſtalked Chara.

The root of this ſpecies is fibrous; it penetrates perpendicularly into the ground, to the depth of three or four inches: from this ariſe ſeveral ſtalks, which are round, ſlender, and ſmooth, but longitudinally and ſomewhat obliquely ſtriated: they are geniculated and procumbent, uſually ſpreading themſelves ſeveral ways along the ſurface of the mud under water, with only the tops bending upwards. Theſe ſtalks are from ſix inches to a foot, or more, in length, and they ſend out ſeveral branches; and theſe, as well as the main ſtalk, ſend out, at the ſeveral joints, numbers of ſmall, oblong leaves, divided at the extremities, and terminating in points. The ſeeds are brown, ſmall, and of an oval figure, and gloſſy ſurface, and they lie naked. The whole plant is of a greyiſh-green colour, while in the water; and of a whitiſh-grey, when dried. It is of a diſagreeable ſmell and taſte, and ſo brittle, that it is eaſy to rub it to pieces between the fingers, or even to crumble it to powder.

It is common in ditches and ſtanding waters about London: it grows principally in muddy places, under three or four feet water. Linnæus calls it, Chara vulgaris, in his Flora Laponica; C. Bauhine, Equiſetum fœtidum ſub aquis repens; Vaillant, Chara vulgaris fœtida.

2. *Chara aculeis caulinis ovatis.*
The oval, prickled Chara.

This ſpecies loves ſtanding waters, and grows ſometimes at five, ſix, or more feet depth. It's root is compoſed of a vaſt number of fibres: it's ſtalks are numerous, ſix, eight, or more, from one root; they are round, geniculated, lightly ſtriated, and armed at the joints with robuſt and thick ſpines. They grow to a foot, or eighteen inches, in length, when in deep water; where it is ſhallower, they ſometimes do not grow to more than five or ſix inches. The joints are beſet with numbers of narrow, oblong leaves, and, toward the tops, are much thicker than elſewhere. The whole plant is of a greyiſh colour. It is extremely brittle, and, when taken into the mouth, it feels gritty and hard, like the corallines.

This is frequent in the little ponds in Eſſex and Kent, and in many other places. Bobart calls it, Equiſetum fragile, majus, ſubcinereum, aquis immerſum; and Johnſon, Hippuris coralloides.

3. *Chara aculeis caulinis capillaribus.*
The capillary, prickled Chara.

The root of this is a ſmall tuft of fibres. It's ſtalks are numerous, procumbent, round, and geniculated; they are armed with a great number of long and ſlender ſpines, and are leſs brittle than thoſe of the two former, though very eaſily broken. They do not grow to more than eight or ten inches in length, and are of a greyiſh-green colour; the leaves are very ſlender, oblong, pointed, and ſtand thick at the joints. The whole plant is procumbent, and of a greyiſh-green colour.

This ſpecies is found in many parts of Ireland, and in ſome of the weſtern counties of England, but not about London. It grows in ſhallow waters with muddy bottoms. Vaillant calls this, Chara major caulibus ſpinoſis. Bobart, Hippuris muſcoſus cauliculis ſpinulis crebrius exaſperatis.

We have, beſide theſe three ſpecies, 1. The ſix-leaved Chara, or gritty Equiſetum of Geſner. 2. The little Chara, with very ſlender ſtalks and leaves; and, 3. The little, pellucid, flexile Chara, with very numerous ſeeds: all common in our ditches about London.

EQUISETUM.

EQUISETUM is a genus of plants, the parts of fructification of which are ſo little diſtinguiſhable, that it's general ſtructure is neceſſary to be called in to eſtabliſh the character. It's root is long and creeping. The plant conſiſts of ſtalks, in ſome ſimple, in others branched, or producing ſetæ, called by ſome leaves, but really

really of the ſame ſtructure with the reſt of the plant; in all hollow, and made up of ſeveral joints, or ſhort tubes, inſerted into one another like ſo many cups.

All we are able to diſtinguiſh, as to the fructification, is, that the parts of it are arranged into a kind of ſpike, of an oblong oval form, and are orbicular in figure, and peltated, and that they divide irregularly, and in various angles from the baſe. Many very eminent authors ſay that theſe flowers are produced on ſome plants, and, on others of the ſame ſpecies, ſeeds naked, or without capſules; but this ariſes from the error of confounding the charæ with the equiſeta, and ſuppoſing them to have male plants with ſpikes of flowers, which is not the caſe.

Moſt of the botanical writers have called the ſeveral ſpecies of this genus by the proper name of Equiſeta, but they have alſo, in general, comprehended under it the ſeveral ſpecies of two other diſtinct genera, the chara and the hippuris.

1. *Equiſetum durius caule nudo ſcabro.*
The hard, naked Horſetail.

The root of this ſpecies is long, ſlender, roundiſh, and creeping; of a duſky colour, and inſipid taſte. It creeps a long way under the ſurface of the earth, and ſends up, at ſeveral parts, the plants. The ſtalk is ſimple, rounded, largeſt at the baſe, and gradually ſmaller to the top, where it terminates in an obtuſe point. It is of a duſky purpliſh colour, inclining to blackneſs at the baſe, but, in all other parts, of a pale whitiſh green. It grows to two or three feet in height, uſually, without the leaſt rudiment of leaf or branch in any part, a mere ſtrait, ſingle column; it's ſurface is deeply ſtriated, and the whole ſtalk is compoſed of a number of ſhort tubular joints, inſerted into one another.

When in the ſtate of fructification, the top of the ſtalk is terminated by an oblong oval ſpike, three quarters of an inch in length, and more than a third of an inch in diameter. This is brown, hard, and formed of little roundiſh peltæ: in this ſtate, alſo, the plant ſometimes puſhes forth a kind of little leaves at the joints, toward the top of the ſtalk; and ſometimes a ſingle twig ariſes from ſome one of the lower joints, but this is more rare. The whole plant is extremely hard and harſh to the touch, and it continues freſh the whole year. It grows in wet, boggy places, in ſome parts of England, but more frequently in Germany. Our workmen uſe it very much in ſmoothing their works in wood, ivory, &c. they call it *Ruſh*, and *Shavegraſs*; it will even take effect upon braſs and iron. C. Bauhine calls it, Equiſetum foliis nudum, non ramoſum, ſive junceum.

2. *Equiſetum caule craſſo, verticilis denſiſſimis, ſetis ſimplicibus.*
The thick-ſtalked Equiſetum, with very thick-ſet, ſimple ſetæ.

This is a very ſtately plant, and is by much the largeſt of the Equiſetum kind. It's roots are fibrous, and ſpread horizontally, under the ſurface of the ground. From theſe, in ſeveral places, riſe the ſtalks; they grow to be three, four, or five feet high, and of near half an inch in diameter. They are round, hollow, and white in colour, and are compoſed of a number of ſhort tubular joints, inſerted into one another. They are ſmooth on the ſurface, or, at the utmoſt, ſo lightly ſtriated, that it is ſcarce diſcernible. At every joint of the ſtalk there grow a vaſt number of ſetæ; theſe are green, of the thickneſs of a packthread, ſtriated, and not branched, but compoſed of joints, in the manner of the main ſtalk; theſe are nine or ten inches long, and from twenty to thirty of them are produced at every joint, ſo that the whole plant makes a very beautiful figure. It is not uncommon to ſee a thouſand, or more, of theſe plants growing together, in which caſe they make a very ſingular and very pretty appearance. The ſtalks, as they grow old, often loſe their white colour, and turn of a duſky blackiſh-purple, eſpecially on the ſide next the ſun.

We have this ſpecies in our woods, and in other wet places, not unfrequently; where it produces it's fructifications, they ſtand on naked ſtalks, in large oval ſpikes. C. Bauhine calls this, Equiſetum paluſtre longioribus ſetis; others, Equiſetum paluſtre majus.

3. *Equiſetum*

3. *Equiſetum ſetis ſimplicibus internodia vix ſuperantibus.*
The ſhort and ſingle-branched Equiſetum.

The root of this ſpecies is of the thickneſs of a packthread, jointed, and creeping. It runs a vaſt way under the ſurface, and ſends down fibres, in conſiderable numbers, at every joint. It's ſtalks are green, ſlender, and very deeply ſtriated. From every joint there grow ſix, eight, or ten ſetæ, green like the ſtalk, and, like it, compoſed of ſeveral tubular joints, fitted into one another. Theſe ſetæ are ſhort, ſcarce longer than the joints of the main ſtalk. When the plant flowers, the ſpike ſtands not upon a naked ſtalk, as in moſt, but on the top of the perfect plant. It is not unfrequent with us in rotten, boggy ground. C. Bauhine calls it, Equiſetum paluſtre brevioribus ſetis; others, Equiſetum paluſtre minus.

There are, beſide theſe ſpecies, 1. The ſoft-ſtalked, naked Horſetail. 2. The corn-field Horſetail, with long ſetæ, ſometimes ſending out ſecondary ones. 3. The ſmall, naked, variegated, Braſilian Horſetail; this grows alſo in England. 4. The wood Horſetail, with very ſlender, ramoſe, ſetæ. 5. The marſh Horſetail, with very long and very ſlender ſetæ. 6. The little, marſh Horſetail, with ſhort ſetæ, and numerous heads. 7. The marſh Horſetail, with very long, ſlender ſetæ. 8. The branched, ruſhy Horſetail.

FICUS.

FICUS is a genus of plants, differing, as has been ſuppoſed, from all others, in that it's parts of fructification are incloſed within the body of what we call the fruit. Microſcopic obſervations, however, have ſhewn us many parallel inſtances among the fungi, delivered in their proper place. The Ficus produces both male and female flowers ſeparate, and in the different parts of the fruit, the outer part of which is properly the common calyx.

This is large, fleſhy, of a turbinated figure approaching to oval, hollow, and cloſe with numerous ſerrated and crooked ſquammulæ of a ſemi-lanceolated figure. The inner ſurface of this cup is every-where covered with floſcules; the exterior ones, or thoſe neareſt the margin of the calyx, are the male flowers, and are few in number; the others are female ones, and are much more numerous.

The male flowers ſtand each on it's own peduncle: the cup is a perianthium, erect, divided into three, four, or five parts, lanceolated in figure, equal in ſize, and erect. There is no corolla. The ſtamina are three filaments, ſlender, and of the length of the cup. The antheræ are double: there is among theſe a crooked and periſhing rudiment of a piſtil.

The female flowers alſo ſtand each on it's own ſeparate peduncle; in theſe the calyx is a perianthium, divided into five lanceolated-pointed ſegments, nearly equal in ſize, and erect. There is no corolla. The germen of the piſtil is oval, of the ſize of the perianthium. The ſtyle is ſubulated, bent, and grows from one ſide of the germen, not from it's point. The ſtigmata are two in number, both bent back and pointed, but one longer than the other. There is no pericarpium to this flower, but the cup contains the ſeed, which is ſingle and roundiſh.

1. *Ficus foliis palmatis.*
The Fig-tree, with palmated leaves. **The Fig-Tree.**

This grows to fifteen or twenty feet high, and ſends out a number of long and large branches, naturally ſpreading a great way. It's trunk is as thick as a man's thigh, or more, and does not riſe erect, but is uſually tortuous. It's bark is ſmooth, while it is young, but, in the old branches and trunk, ſomewhat rough. The wood is white, ſoft, and ſcarce fit for any uſe. The leaves are very large, and of a palmated figure, divided into five parts: they are rough to the touch, and of a deep green colour. The fruit, in which are contained all the parts of fructification, ariſes near the ſetting on of the leaves; it is green, at firſt, but purpliſh, when ripe, and full of large roundiſh ſeeds. The unripe fruit, or the tender bark, or young leaves, wounded, emit a milky juice of an acrid and bitter taſte. The whole fruit in this tree is properly the common calyx of the fructification.

This Fig-rree is a native of Italy, Spain, and many parts of the Eaſt. With us it is cultivated in gardens, and thrives perfectly well in the open air, unleſs a very ſevere winter happen.

It is ſingular, in regard to this tree, that the fruit, in general, contains both male and female flowers, and yet ſome trees of the ſame ſpecies contain in their fruit only male flowers, and others only female ones.

Botanical writers, who have not been aware of this, have deſcribed theſe luſus naturæ, in the ſame ſpecies, as two ſeparate ones; the male quite diſtinct from the common Fig-tree, though, in reality, it is no more than the extraordinary ſtate of that tree.

The Fig-tree with only male flowers in the fruit is called, by C. Bauhine, and others, Caprificus and Erinoſyche; by Pontedera, Caprificus præcox fructu nigricante, parvo, deciduo. They agree to call that with only female flowers, Ficus communis, as well as the hermaphroditic kind. The Greeks tell us ſtrange things of what they call the caprification of Fig-trees: they affirm, that, unleſs the fruit of the Caprificus be hanged on the branches of the common Fig-tree, it's fruit will not ripen, but decay and fall off. We had been uſed for a long time to wonder at, if not to laugh at, this account; at length, Tournefort, travelling over the part of the world where the people lived who wrote of it, found the practice not only ſtill continued, but abſolutely neceſſary: he attributes the ripening of the figs, by means of this caprification, or hanging the fruits of the Caprificus on the branches, to the puncture of certain inſects, bred in thoſe fruits; but this is unphiloſophical: a better account of the effect is obvious enough. The Fig-trees cultivated in that part of the world are ſuch as produce only female flowers; the fruit of the Caprificus, thus hung upon their branches, produces only male flowers, and, Mr Tournefort tells us, it is open at the bottom, at the time it is hung on theſe trees: it is eaſy to ſee, therefore, that the ripening of the figs, after this proceſs, is not owing to the punctures of inſects, but to the ſupply of that male farina which they before wanted. The fact is obvious, though the manner in which it is effected is not ſo perfectly underſtood.

The other ſpecies of the Fig-tree are, 1. The hard-leaved Fig, with robuſt, erect branches. 2. The dwarf Fig, or Chamæficus. 3. The Malabar Fig, with cuſpidated leaves, and ſmall, round, double fruit. 4. The roundiſh-leaved Bengal Fig, with orbicular fruit. 5. The ſmall, round, white-fruited Fig. 6. The oblong, bluiſh-fruited Fig. 7. The mulberry-leaved Portugal Fig. 8. The Goa Fig-tree, with quince-like leaves, and a ſmall fruit. 9. The American, cheſnut-leaved Fig, with a ſmall, ſpotted, round fruit. 10. The great, citron-leaved, American Fig-tree, with a large, umbilicated fruit. 11. The bay-leaved American Fig-tree, with very large fruit. 12. The dactyloide American Fig, with leaves ſilvery underneath: and, 13. The Cyprian Fig of J. Bauhine: or, The wild Fig, with an undivided, lightly ſerrated leaf.

Beſide theſe, which are diſtinct ſpecies of the Ficus, Tournefort has mentioned a great many others as ſuch, which are truly no more than varieties, and their difference chiefly in the colour of the fruit. The white, the green, the red, the purple, the yellow, and the black Fig are of this kind, all raiſed, by culture, from the firſt ſpecies, and influenced by it, ſometimes, to change their ſhape, as well as colour, though the leaves and every other part of the tree remain unaltered.

OPHIOGLOSSUM.

OPHIOGLOSSUM is a genus of plants, no part of the fructification of which is viſible, except the fruit. This is an oblong, double, or diſtichous capſule, divided, by a great number of tranſverſe articulations, into many cells, each of which, when mature, opens tranſverſely, and is found to contain a great number of ſmall ſeeds, of a ſubovate figure.

1. *Ophioglossum fronde ovata.*
The ovated-leaved Ophioglossum. **Adder's-tongue.**

The root of this little plant is a large tuft of fibres, thick, and ſufficiently long; the taſte of them is ſweetiſh at firſt, but afterwards acrid and bitteriſh. From this root there

there riſes a ſingle pedicle of three or four inches long, green and ſucculent; this ſupports a ſingle leaf of an ovated figure, with no viſible nerves or veins in it, very thick and fleſhy, and of a beautiful bright green; this is ſometimes ſhorter and rounder, ſometimes longer and narrower. From the inſertion of the pedicle ariſes the peduncle, ſuſtaining the fructifications; theſe are arranged into a long common capſule, an inch and half, or more, in length, and a fourteenth of an inch, or not much more, in diameter; this terminates in a point, and is ſerrated as it were at both edges.

This is a native of England, and is common enough in damp paſtures; it riſes in April, and remains till June, when the whole plant decays, except the root, which lies deep, and is perennial. Caſpar Bauhine deſcribes what he calls three ſpecies of Ophioglosſum; 1. The common one now deſcribed; 2. An angular-leaved one; and, 3. A roundiſh-leaved one. Mentzel deſcribes three ſpecies alſo, beſide the common one: 1. A large, acute-leaved one, with a double tongue. 2. A middle-ſized, obtuſe-leaved one, with a double tongue; and, 3. A very ſmall, double-tongued kind. Theſe, however, are no more than varieties of the common Ophioglosſum, the capſule or ſpike of which is often bifid, and the leaves, as already obſerved, vary greatly in length and breadth. All Europe, ſo far as is yet known, affords only one ſpecies of Ophioglosſum: but, in America, there are two diſtinct ſpecies, beſide the common European kind. I have received both from Penſylvania. Plumier alſo has deſcribed both: the firſt is the reticulated, heart-ſhaped, leaved Ophioglosſum; the other, the palmated Ophioglosſum; both evidently real diſtinct ſpecies.

Tournefort makes eight ſpecies of Ophioglosſum, but he does it by taking the varieties of C. Bauhine and Mentzel for ſpecies.

Ophioglosſum has long been famous as a vulnerary, but it is more uſed by the good women in the country than in the ſhops. An ointment is made of it, with lard or butter; and it's juice, or the powder of the dried leaves, is given internally.

OSMUNDA.

OSMUNDA is a genus of plants, of which no part of the fructification is diſtinctly viſible, except the fruit. This is a globoſe, diſtinct capſule, many of which are arranged together in cluſters, and which, when mature, open horizontally, and are found to contain a great number of very minute ſeeds, of an ovated ſhape.

1. *Oſmunda ſcapo paniculato polyphyllo.* *The paniculated, many-leaved Oſmund.* Oſmund Royal.

The root of this ſpecies is compoſed of a vaſt number of thick fibres, variouſly implicated and interwoven, very long, and of a black colour. From this ariſe ſeveral ſtalks; each grows to three or four feet high, and is round, ſmooth, ſtriated, and of a green colour in the tenderer parts. The ſtalk divides into ſeveral branches, on each of which there ſtand eight, nine, or ten pair of foliola, making a pinnated leaf, terminated by an odd foliole at the extremity. The folioles are not ſerrated at the edge; they are of a pale green colour, and have an almoſt infinite number of very ſmall and fine veins in them. The upper part of the common pedicle, or ſtalk, is divided into a number of ramifications of an inch or two in length, which are covered with a vaſt number of capſules of ſeeds.

This ſpecies is a native of England, and is not uncommon on our boggy grounds, and in damp woods. Tournefort calls it, Oſmunda vulgaris; and C. Bauhine, Filix ramoſa, non dentata, florida.

2. *Oſmunda frondibus pinnatis foliolis ſemipinnatifidis, ſcapo nudo diſticho.*

The pinnated Oſmund, with ſemipinnatified leaves, and a naked, diſtichous ſcapus.

This is an extremely elegant fern; it grows to eighteen or twenty inches in height. It's root conſiſts of a vaſt cluſter of intricately interwoven black fibres, conſiderably thick, and of a very diſagreeable taſte. Four or five plants of it uſually ariſe from

from each root. Each plant conſiſts of a ſingle leaf, the petiole of which riſes naked for five or ſix inches; it then ſends off a number of branches, and each of theſe is furniſhed with a double ſeries of oblong leaves, or foliola, between every two of which there runs a ſmall, narrow membrane. The ſtalk toward the top has a long and deep furrow running all the way up it; the upper part of it is very thickly beſet with ſeed-veſſels. The folioles are all of them narrow, but moſt of all thoſe which have ſeed-veſſels on them, the edges of all theſe turning inwards.

This is a native of many parts of Europe and America, but not of England. It throve very well in the late Lord Petre's garden. Ray calls it, Lonchites Norwegica major, App. 68. C. Bauhine, Filix paluſtris altera fuſco pulvere hirſuta, Pin. 358. Ammon, Filicaſtrum ſeptentrionale et paluſtre, Rut. 175. Thalius, Strictheopteris, Herc. 119, and Muntingius, Strictifera, Phyl. 291. It is frequent in Norway and Denmark, and in the northern parts of Ruſſia.

3. *Oſmunda ſcapo caulino unico fronde pinnata ſolitaria.*
The ſingle-ſtalked Oſmund, with a ſingle, pinnated leaf. **Moonwort.**

This is a very ſingular and very beautiful plant. It grows to ſix or eight inches high. The root is fibrous and perpendicular, black on the outſide, and yellow within; from this riſes a ſingle pedicle, which grows up naked to three or four inches, and is round, and moderately thick: at about this height grows a ſingle pinnated leaf, of an inch and half long; it is compoſed of four or five pairs of folioles, with the end terminated by an odd one; each of the folioles is narrower at the baſe, and from thence extends into a kind of ſemicircular figure, ſo as to repreſent a half-moon. Theſe leaves are thick, ſucculent, and fleſhy, with no viſible fibres. From the ala or inſertion of this leaf grows a ſtalk of an inch and half, or more, in length. From the ſides of this ariſe peduncles covered with ſeed-veſſels, and making a very elegant appearance.

This ſpecies is a native of England, but it is not common. I have found it on Lincoln-heath, and in ſome other places. C. Bauhine calls it, Lunaria racemoſa minor et vulgaris. Tournefort, Oſmunda foliis lunatis.

Authors have deſcribed no leſs than five ſpecies of this plant, under the name of Lunaria. C. Bauhine deſcribes one under the name of Lunaria minor rutaceo folio, Pin. 355. Breynius, another under the name of Lunaria racemoſa minor matricariæ folio, Cent. 184; and Moriſon, a third under the name of Filicula ſive adiantum foliis inferioribus coriandri, cæteris rutæ murariæ ſive fumariæ, Hiſt. 3. p. 585; and, finally, Breynius, another under the name of Lunaria racemoſa minor adianti folio, Cent. 1. 93.

All theſe, however, are no more than varieties of the common kind, as appears both from ſpecimens of them, and even from the deſcriptions of the authors themſelves. If we could reduce the varieties to their proper ſpecies, through the whole hiſtory of plants, as eaſily and as certainly as may be done in caſe of this ſpecies, how much would the vaſt number of ſuppoſed ſpecies, at preſent deſcribed by authors, be reduced? From more than ſeventeen thouſand, 'tis a queſtion, whether there would remain ten thouſand?

The other ſpecies of Oſmund really diſtinct are, 1. The hairy, ſpleenwort-leaved, American Oſmunda. 2. The great, fern-leaved, American Oſmund. 3. The hart's tongue-leaved Oſmund. 4. The crenated-leaved Oſmund. 5. The deeply laciniated and lightly-hairy Oſmund. 6. The aſphodel-rooted Oſmund. 7. The verticillate Oſmund; and, 8. The lanceolated and lightly ſerrated Oſmund. Almoſt all theſe are of American origin, and are deſcribed by Plumier.

The common Oſmund has the credit of being an excellent vulnerary, and a cure for the rickets.

PTERIS.

PTERIS is a genus of plants, in which the fructifications are diſpoſed in form of a line, ſurrounding the edges of the lower ſide of the leaves.

1. *Pteris*

1. *Pteris fronde ſupradecompoſita, foliolis pinnatis, pinnis lanceolatis, infimis pinnatifidis, ſuperioribus minoribus.* **Female fern.**
Decompound, pinnate, ſmall-leaved Pteris.

The length of this ſpecific name, incapable of being ſhortened by Linnæus, and acquieſced in by Van Royen, and all that have followed him, may ſerve to ſhew how very intricate a claſs of plants the ferns are, and how difficultly diſtinguiſhable from one another. The root of this ſpecies creeps under the ſurface to a vaſt diſtance. The plant ariſes to four or five feet high. The ſtalk is naked to three feet, or thereabout; it is hollow, tender, and green: at this height it ſends out a number of branches, which divide themſelves into others, and thoſe yet again into others. The foliola, which inveſt theſe, are ſmall, and even at the edges, obtuſely pointed, and arranged in the pinnated manner, a ſingle or odd leaf cloſing the end of the pinna. The foliola are green on the upper ſide, and greyiſh underneath. This ſpecies is too common both in England, and every other part of Europe; our common people call it Brakes; and the botanical writers, Female fern. C. Bauhine calls it, Filix ramoſa major pinnulis obtuſis, non dentatis.

2. *Pteris fronde pinnatifida lanceolata laciniis parallelis integerrimis.* **Rough Spleen-wort.**
The pinnatifid, lanceolated Pteris, with parallel laciniæ.

This is a very elegant plant, and extreamly different from the former ſpecies in it's general form, though perfectly like it in it's generical character. It's root is compoſed of a vaſt number of fibres, collected into a tuft; they are black on the outſide, and whitiſh within; from this ariſe a vaſt number of leaves, fifty or more in a cluſter. Each of theſe is an entire plant, it grows to a foot in height; the ſtalk is black at the bottom, and green higher up: the leaf begins to expand at about four inches from the baſe, and is one ſingle pinnated one, broadeſt near the middle, and terminating in a point. The ſegments or lobes ſtand horizontally, and are very different from one another in ſhape. Thoſe on the lower part of the leaf are broad, and obtuſe, like thoſe of the common aſplenium; the others, up to the top of the leaf, reſemble thoſe of polypody, but are longer, narrower, and pointed at the ends. The longeſt of theſe ſegments is ſcarce an inch in length, and they are all entire and undivided at the edges. The leaves which produce the ſeeds uſually riſe in the midſt of a cluſter of theſe, and their ſegments appear longer and narrower than thoſe of the others; but this is merely owing to the fructification.

This ſpecies is a native of England; and in France, and almoſt every other part of Europe, it is very common. It has generally been eſteemed a ſpecies of polypody or lonchitis, but erroneouſly. C. Bauhine calls it, Lonchitis minor, Pin. 359. Camerarius, Lonchitis aſpera minor, Epit. 669. Haller, Struthiopteris. Tournefort calls it, Polypodium anguſtifolium, folio vario, 540.

The common female fern is eſteemed an excellent medicine in caſes of worms; and the latter ſpecies is not leſs celebrated, as a vulnerary: but at preſent they are neither of them uſed in the ſhops.

LONCHITIS.

LONCHITIS is a genus of plants, the fructifications of which are arranged into lunulated ſeries, and diſpoſed ſeparately under the ſinus's of the leaves.

1. *Lonchitis petiolo ſtrigoſiore ſpinoſo.*
The Lonchitis, with a ſlender, prickly ſtalk.

The root is black, fibrous, and tough: the ſtalks are numerous, ſlender, rounded, but with a furrow in the front, and ſurrounded with weak prickles of a gloſſy black. The plant grows to a foot and half high: the alæ, which ariſe from the main ſtalk, are uſually ſimple; ſometimes they ſend off others near their baſes; they are each

formed of a ſingle pinnatifid leaf. The ſegments are deep, the whole leaf broad and thin, and of a fine green; the ſeeds are arranged into little cluſters of a lunated figure, and white colour, placed at the baſe of the ſinuations, one to each. It is a native of Martinico. Plumier calls it, Filix latifolia ſpinulis mollibus et nigris aculeata.

2. *Lonchitis petiolo craſſiore villoſo.*
The thick and hairy-ſtalked Lonchitis.

The root is long and thick, knotty, and furniſhed with thick fibres. The plant riſes to ſeven feet high: the ſtalk is an inch thick, round, but furrowed in the front, and hairy. The alæ are pinnatifid, five inches long, and about two broad, at the bottom. The ſegments are large, rounded, and crenated at the edge: they ſomewhat reſemble the figure of the leaves of the oak. The ſeeds are arranged into lunated cluſters, placed ſeparately at the baſes of the ſinuations of the pinnæ. It is a native of Martinico, and grows near waters. Plumier calls it, Filix villoſa pinnulis quercinis.

ADIANTUM.

ADIANTUM is a genus of plants, the fructifications of which are collected into cluſters, in form of oval ſpots, and placed on the under part of the tops of the leaves, or of the extremities of the ſegments, both which are always where the ſeeds are found, curled inwards.

1. *Adiantum fronde duplicato-pinnata foliolis ſemiorbiculatis ſinuatis.* **True Maiden-hair.**
The duplicate-pinnated Adiantum, with ſemiorbicular ſinuated foliola.

This is a very beautiful little plant; it grows to ſix, eight, or ten inches high. The root is fibroſe, and variouſly implicated, black on the ſurface, and white within; from this riſe ſeveral ſtalks together. They are very ſlender, black, and of a ſhining ſurface; they grow up to half their height naked, but from that part to the top they ſend out on each ſide ſeveral pinnæ, or ſmall branches: theſe are not more than an inch or two in length, and are placed alternately at ſome diſtance on the main ſtalk. Each of theſe is regularly pinnated; there are about four foliola on each ſide, and one odd one at the end. Theſe foliola are affixed to ſhort petioles, and are of a ſemiorbicular figure, ſinuated at the edges, and the ſegments, or ſhort lobes formed by the ſinus's, are roundiſh. The whole leaf or foliole is of a pale green colour, ſmooth on the ſurface, and ſoft to the touch.

This ſpecies is not a native of England; but in many places in France, and in other parts of Europe, it is common enough. J. Bauhine calls it, Adiantum ſive capillus Veneris verus, 3. 751; and C. Bauhine, Adiantum foliis coriandri; others, Capillus Veneris verus.

2. *Adiantum fronde ramoſa diffuſa.* **American Maidenhair.**
The branched, diffuſe Adiantum.

The ſingular manner of growing in this plant is ſo obvious a diſtinction from all the other ſpecies of this genus, that ſcarce any thing more than it's name is neceſſary to diſtinguiſh it from all the reſt. It is an extreamly elegant plant. It's root is compoſed of a cluſter of long black fibres, variouſly interwoven one with another; from this ariſe ſeveral plants together, five, ten, or more, in a cluſter.

The ſtalk is round, of the thickneſs of a packthread, and of a fine ſhining black colour. This riſes ſingle to about ſix or eight inches high; at this height it immediately divaricates into two or three main ramifications, and, each of theſe immediately dividing into three or four more, the whole top of the plant forms itſelf into a ramoſe head: the ſeveral branches ſeparate very widely from one another; ſome of them are erect, or nearly ſo; many horizontal, and ſome dependent; each extream ſubdiviſion is from an inch to three inches in length, and elegantly pinnated. The foliola are of a very ſingular figure, oblong, obtuſely pointed, ſtrait on the lower edge, and rounded

rounded and ſinuated on the upper; they do not ſtand in pairs, but alternately, on very ſhort pedicles, and a ſingle or odd leaf cloſes the extremity of the branch.

This ſpecies is a native of North America, but it ſucceeds very well in our gardens. The deſcription here given of it is formed on one of the plants growing here: in Canada it grows to four or five feet high, and branches out in an extreamly elegant manner. C. Bauhine calls it, Adiantum fruticoſum Braſilianum, Pin. 355; and Cornutus, Adiantum Americanum, 7.

The other ſpecies of Adiantum are, 1. The red-ſtalked Scottiſh Adiantum; this was firſt found by Sibbald, who improperly divides it into two ſpecies, a larger and a ſmaller. 2. The little, pellucid, Engliſh Adiantum, with bifid or trifid leaves. 3. The hexagonal-leaved Adiantum. 4. The triphyllous, obtuſe-leaved Adiantum. 5. The Italian Adiantum, with multifid leaves. 6. The flabelliform Chineſe Adiantum. 7. The lichen-leaved Adiantum. 8. The creeping, ſhrubby, prickly Adiantum. 9. The finely divided Adiantum. 10. The capillaceous Adiantum. 11. The climbing Adiantum, with finely divided, obtuſe leaves. 12. The extreamly-branched, obtuſe-leaved Adiantum. Moſt of theſe ſpecies are American, and not known to the world, otherwiſe than as deſcribed by Plumier, amongſt his American ferns.

The firſt deſcribed ſpecies is the Adiantum verum of the ſhops: it is a famous pectoral, and makes a very pleaſant ſyrup, called Capillaire; but an infuſion of it, in manner of tea, ſucceeds better.

ASPLENIUM.

ASPLENIUM is a genus of plants, in which the fructifications are arranged into cluſters, diſpoſed in form of ſtrait lines, and are placed under the diſk of the leaf. This genus includes the Aſplenium, Lingua Cervina, and Trichomanes of authors, the fructifications of all the ſpecies of every one of theſe ſuppoſed diſtinct genera being arranged in this manner.

1. *Aſplenium fronde pinnatifida, laciniis alternis, adnatis.* **Smooth Spleenwort.**
The pinnatifid-leaved Aſplenium, with alternate laciniæ.

This is a very ſmall, but a very ſingular, plant. It's root is compoſed of a cluſter of ſlender black fibres. From this ariſe ten, twelve, or more leaves, ſtanding very cloſe to one another. They are, at full growth, about three or four inches long, and half an inch, or a little more, in diameter. Every leaf is a compleat plant: the pedicle ariſes naked a little way, but thence to the top it is pinnatifid. The lobes are ſmall and ſhort; they ſtand alternately on the ſtalk, and adhere, by their own broad baſe, without any pedicle. They are of a pale green colour, thick and ſucculent, and hairy on the under ſide; the extremity is cloſed by an odd foliole or ſegment. The lobes which form this leaf are not diſtinct and entire, as the foliola in many of the ferns, but they ſeem only ſegments of one general leaf.

This ſpecies is frequent in England on old walls, and in other barren places. C. Bauhine calls it, Ceterach officinarum, p. 354. J. Bauhine, Aſplenium, ſive ceterach, 3. 749.

2. *Aſplenium frondibus linearibus, integris, baſi cordatis, inflexis, petiolis hirſutis.* **Hart's Tongue.**
The linear-leaved Aſplenium, cordated at the baſe with hairy pedicles.

The root of this ſpecies is compoſed of a multitude of long, ſlender, black fibres. The plants ariſe ten, twelve, or more, in a cluſter. Each conſiſts of a ſingle, undivided leaf on it's proper pedicle. The pedicle is black, hairy, and two or three inches long. The leaf is cordated at the baſe, and terminates in a point; it is ſix or eight inches long, and about an inch and half in breadth, of a fine green colour, and gloſſy ſurface; at the back of the leaves the fructifications ſtand in thick, ſhort, oblique lines.

This ſpecies is very common in England in old wells, and other damp, ſhady places. C. Bauhine calls it, Lingua cervina officinarum. J. Bauhine, Phyllitis ſive lingua

lingua cervina. Almoſt all the botanical writers have deſcribed it; and many of them, ſeveral times over, under the name of many diſtinct ſpecies. We are told of, 1. a Lingua cervina maxima undulato folio auriculato per baſin. 2. A Lingua cervina foliis in ſummo multifidis. 3. A Lingua cervina folio undulato criſpo; and 4. of a Lingua cervina folio diviſo criſpo undulato: but all theſe, and four or five others recorded as diſtinct ſpecies by Tournefort and others, are no more in reality, than varieties of the common hart's tongue deſcribed here, which ſometimes grows larger, ſometimes ſmaller, and has it's leaves ſometimes divided at the top, ſometimes curled at the edge.

3. *Aſplenium fronde pinnata, foliolis ſubrotundis crenatis.* English
The pinnated Aſplenium, with roundiſh, crenated foliola. Maidenhair.

This is a very beautiful little plant. It's root is compoſed of a cluſter of ſlender black fibres; from this there riſe a great number of the plants together. Each plant is ſimple and pinnated: the ſtalk is round, ſlender, black, and of a very gloſſy ſurface; it grows up naked, for an inch or two; after this it is, to the extremity, beſet with a double ſeries of beautiful folioles. The whole plant is uſually five or ſix inches long, ſometimes more. The foliola are of an oval figure, rounded at the end, and adhere to the ſtalk without any pedicle; they ſtand oppoſite, or nearly oppoſite, to one another, and the extremity of the ſtalk is terminated by a ſingle leaf or foliolum. They are of a fine bright green colour, and ſmooth ſurface. The ſtalk is brittle.

This ſpecies is very frequent in England on old walls, and in other ſhady places. C. Bauhine calls it, Trichomanes ſive polytrichum officinarum, p. 356. J. Bauhine, Trichomanes ſive polytrichum, 3. 754; and others, Trichomanes mas, and vulgare.

The leaves or foliola of this ſpecies are ſometimes even, ſometimes ſerrated at the edges; and the plant grows ſometimes larger, ſometimes ſmaller, and is ſometimes ſimple, ſometimes divided into two or more parts at the extremity, like the Phyllitis.

Authors have deſcribed theſe ſeveral varieties of this ſpecies under the names of ſo many ſpecies. The Trichomanes foliis eleganter inciſis, of Tournefort; the Trichomanes minus et tenerius, of C. Bauhine; and the Trichomanes ramoſum of the ſame, and other authors, are no other than the varieties of this ſpecies.

4. *Aſplenium frondibus alternatim decompoſitis, foliolis cuneiformibus crenulatis.* Wall Rue.
The Aſplenium, with alternately decompound branches, and crenated, cuneiform leaves.

This is one of the ſmalleſt of the fern-kind. It's root is compoſed of ſeveral fine and ſmall black fibres, variouſly interwoven one with another. From this ariſe a great number of ſtalks or ſeparate plants; theſe are ſeldom more than two inches in height, often not much more than an inch. The ſtalks are duſky coloured, or blackiſh, near the root, but higher up they are of a paler green; they are divided, toward the top, into many ramifications, and at the extremities of theſe, and on their ſides, ſtand little leaves, in ſome degree, reſembling thoſe of the true adiantum of the ſhops. The whole plant together has been ſuppoſed to reſemble a leaf of rue, whence it's common name Ruta muraria. The leaves are thick and rigid, obtuſe at the extremities, and crenated: they are of a pale green on the ſurface, and browniſh underneath.

This ſpecies is frequent on old walls in England, and elſewhere. C. Bauhine calls it, Ruta muraria, p. 356. Tabernamontanus, Adiantum album, 796.

5. *Aſplenium frondibus duplicato-pinnatis foliis inferioribus majoribus, foliolis obverſe ovatis, ſuperne crenatis.* Black Maiden-hair.
The ramoſe Aſplenium, with cordated foliola.

The root of this ſpecies is compoſed of a cluſter of black and conſiderably thick fibres; from this there riſe uſually ſix or eight leaves together. The pedicle is rigid, hard, and of a black colour, and ſhining ſurface; it grows up naked to five or ſix inches high, and then it ſends off a number of branches, which ſtand regularly over-

againſt

againſt one another, ſo as to give the whole compound leaf a kind of triangular form, by their growing ſhorter all the way toward the top. Theſe branches are pinnated on each ſide: the pinnules or foliola are deeply ſinuated, and ſometimes they are ſubdivided into others; they are broadeſt at the lower part, and terminate in a point. The whole upper ſurface of the leaf is of a dark green colour, the under ſide is paler. This ſpecies is very frequent with us in woods, and other ſhady places, about the ſtumps of trees. C. Bauhine calls it, Adiantum nigrum foliis longioribus pulverulentis pediculo nigro, p. 355. J. Bauhine, and others, Adiantum nigrum officinarum.

This genus is a very extenſive one. Every one of theſe five ſpecies has been made by moſt authors a peculiar genus, and ſeveral ſpecies are referable to each. Of the Ceterach-kind; there are, 1. The ramoſe Ceterach. 2. The tall, hairy Ceterach. 3. The procumbent Ceterach, with undulated leaves.

Of the Lingua Cervina kind, beſide the varieties erroneouſly deſcribed as ſpecies, there are a vaſt number of really diſtinct ones. Plumier has deſcribed more than ſixty diſtinct ſpecies, beſide varieties only of American origin; and we have ſome others in Europe. The principal and moſt ſingular are of the European kind: 1. The ſpinoſe Lingua Cervina. 2. The ſerrated Lingua Cervina. 3. The oak-leaved Lingua Cervina. Of the American: 1. The climbing, ilex-leaved Lingua Cervina. 2. The little, creeping, hairy Lingua Cervina. 3. The round-leaved Lingua Cervina. 4. The narrow-leaved Lingua Cervina, taking root at the ends of the leaves. 5. The bay-leaved, ſerrated Lingua Cervina. 6. The ſcandent, citron-leaved Lingua Cervina. 7. The enſiform, ſerrated Lingua Cervina. 8. The marginated Lingua Cervina.

Of the Trichomanes kind, beſide the varieties already mentioned, there are ſeveral diſtinct ſpecies: 1. The aculeated-leaved Trichomanes. 2. The triangular, crenated-leaved Trichomanes. 3. The cordated-leaved Trichomanes. 4. The ſoft, pendulous Trichomanes. 5. The ſilvery Trichomanes.

Of the Ruta Muraria kind are, 1. The Ruta Muraria, called the curled, florid Adiantum of Swenkfeldt. 2. The tall Ruta Muraria, with narrower leaves. 3. The tall, various-leaved, climbing Ruta Muraria. 4. The thin-leaved, ſerrated Ruta Muraria, a ſpecies not deſcribed, which I met with, many years ſince, on old walls, near Shepton Mallet.

Of the Adiantum Nigrum kind are, 1. The hemlock-like, black Maidenhair. 2. The black Maidenhair, with round ſegments. 3. The narroweſt-leaved, black Maidenhair.

HEMIONITIS.

HEMIONITIS is a genus of plants, the fructifications of which are arranged into lines, ſometimes branched, often uniting with and interſecting one another.

1. *Hemionitis frondibus lineari-lanceolatis integris.*
The Hemionitis, with undivided lineari-lanceolated leaves.

The root is oblong, thick, knotty and creeping, of a greeniſh colour, ſucculent and fibrated. The plant conſiſts of a ſingle leaf, of an oblong, narrow, and linear form. It's length is a foot and half, and it's greateſt breadth not more than an inch: it is very narrow at the baſe, and terminates in a long and narrow point at the extremity; it's colour is a pale green, it's conſiſtence firm. The ſeeds are arranged in long ſeries or lines, uniting with, and interſecting one another in ſeveral places, ſo as to form a kind of chain of oblong links, all along the two ſides of the rib of the leaf. There uſually grow ſeveral plants from the different parts of the ſame root: their pedicles are very ſhort, and are tuberous at the bottom. It grows about the roots of trees in the Caribbee Iſlands. Plumier calls it, Lingua cervina anguſtifolia reticulata.

2. *Hemionitis frondibus palmatis petiolis hirſutis.*
The palmated-leaved, hairy-ſtalked Hemionitis.

The root is compoſed of numerous, ſlender, rigid, black fibres: the ſtalks are numerous, hairy, ſlender, and three, four, or five inches long; they are naked to the

top, where there ſtands a palmated leaf of two or three inches long, and as much in diameter: it is divided into five oblong ſegments, broadeſt at the baſe, pointed at the extremity, and crenated round the edges. Not unfrequently, when the plant is full grown, a young leaf, divided only into three ſegments, ariſes from a fiſſure in the old ones. The ſeeds are arranged in beautiful reticulated ſeries on the back of the leaf. It is a native of many parts of North America. Plumier calls it, Hemionitis aurea hirſuta. Sir Hans Sloane, Hemionitis folio hirſuto et magis diſſecto ſeu ranunculi folio. The whole leaf is indeed hairy, but much leſs ſo than the ſtalk.

POLYPODIUM.

POLYPODIUM is a genus of plants, the fructifications of which are arranged together into round ſpots, and placed on the under ſide of the diſk of the leaves.

This genus includes the Polypodium and the Lonchitis of other authors, excepting for ſome ſpecies which they have arranged under theſe genera, which do not properly belong to them, ſuch as the pinnatifid Pteris before deſcribed, which Tournefort has made a Polypody, and C. Bauhine a Lonchitis, but which properly is neither.

1. *Polypodium fronde pinnata, pinnis lanceolatis, indiviſis, ſerrulatis, alternis connato-ſeſſilibus.* **Common Polypody.**
The lanceolated and ſerrated-leaved Polypody.

The root of this ſpecies is as thick as a man's finger, very long, and runs horizontally along the ſurface of the ground; it is of a duſky colour, and hairy, and full of tubercles, from which it ſends out little cluſters of fibres. From this root, at ſeveral diſtances, there ariſe the leaves or diſtinct plants: each grows to be about a foot, or ſomewhat more, in height. The pedicle is naked for about five inches, and from thence to the top ſtand the pinnæ; they are largeſt at the bottom, and ſmaller all the way to the top; they are about an inch in length at a medium, and about a third of an inch in breadth, of a dark green colour, and, when in the ſtate of fructification, beautifully ſpotted, with yellow dots underneath

This ſpecies is frequent with us on old walls, and under ſhady hedges. C. Bauhine, and moſt of the other writers, call it Polypodium vulgare.

The pinnæ, in this ſpecies, are uſually a little notched; when the plant grows in damp places, they are ſcarce at all ſo; when in dry ones, they are ſomewhat deeply ſerrated; from this variety, Petiver, Ray, Barreliere, and ſome others, have made two ſpecies; 1. The common Polypody; and, 2. The Polypody of the wall, with ſerrated leaves.

2. *Polypodium fronde pinnata, pinnis lineari-lanceolatis.*
The pinnated Polypody, with lineari-lanceolated pinnæ.

This is the moſt pompous and elegant of all the Polypodies. It grows to three or four feet high. It's root is an inch in diameter, and creeps juſt under the ſurface of the earth to a great diſtance. The ſtalk is round, of a pale green colour, rigid and firm; it runs up naked to the height of two feet, from that to the top. It is regularly pinnated. The pinnæ are longeſt and largeſt at the bottom, and ſmaller all the way up. The loweſt of them are eight or ten inches long, and near two inches broad; they are of a pale bluiſh-green colour. The fructifications make large and beautiful round, yellow dots on the under parts of the diſk of the pinnæ.

This ſpecies is a native of America. Lord Petre had it in great perfection in his garden. Plumier, and others, have deſcribed it under the name of Polypodium majus aureum.

3. *Polypodium fronde duplicato-pinnata, foliolis obtusis, crenulatis, petiolo strigoso.*

The duplicato-pinnate Polypody, with obtuse, crenated leaves, and slender stalks. **Male Fern.**

This is a very common plant: it rises to two feet, or more, in height, and, in the broadest part, is often near a foot in diameter. It's root is thick and tuberous; it's stalks, when they first appear, are naked of leaves, but hairy, and very oddly contorted. They are brittle, greenish, and covered, toward the base, with a chaffy matter. The leaves are beautifully pinnated: on the ribs which issue from the stalks, the pinnæ stand alternately, not in pairs, and they are placed at a greater distance than in many other of the species. They are of a dusky green colour, and are spotted on the under part of the pinnæ, in the same manner as the common Polypody, when in the state of fructification. This species is very common with us, under hedges, and in woods. C. Bauhine calls it, Filix ramosa, non dentata. Most of the authors have called it, Filix mas vulgaris, the common male Fern.

4. *Polypodium duplicato-pinnatum, foliolis ovato-acutis crenulatis.*

The duplicately-pinnate Polypody, with ovated, acute, and crenulated leaves. **Dryopteris.**

The root of this species is composed of a number of long flagellæ, which creep just under the surface, or even upon it, and intangle variously with one another. They are of the thickness of a goose-quill, and six, eight, or ten inches long: they are black on the outside, whitish within, and of an austere taste, with some sweetness. From the several parts of these flagellæ there are sent great numbers of capillary fibres into the ground. The plants also arise, at different distances, singly, or two or three together. It grows to six or eight inches high; the stalk rises naked, three or four inches: it is greenish and slender. From this part to the top it is duplicately pinnated: it sends off, on each side, several stalks, or pinnæ, which are themselves also pinnated, or beset with small leaves, placed opposite to one another, in pairs, and adhering to the stalks by a broad base: there are eight, nine, or ten pair of these on the lower pinnulæ, but fewer on the upper ones, as they grow smaller and shorter all the way up: every pinnula has an odd leaf at the end. The stalk is flat on the anterior surface, rounded behind, and is smooth and brittle. The leaves are of a pale whitish, or yellowish-green, and are very thin and tender.

This species is frequent in the boggy parts of England, as in the Isle of Ely, &c. J. Bauhine calls it, Filix minor, non ramosa. Ray, Filix minor, palustris, Hist. 1. 146. The generality of other authors call it Dryopteris.

The other species of Polypody are considerably numerous: of those usually called Polypodies by authors the principal are, 1. The sensible Polypody of Muntingius. 2. The laciniated Polypody of Wales. 3. The great, finely-divided, African Polypody. 4. The black, finely divided Polypody. 5. The pendulous, hairy, reddish Polypody. 6. The ostrich-feather Polypody. 7. The pellucid Polypody. 8. The serrated Polypody, with a blue root. Of those called by some authors Ferns, and by others Lonchitis, the principal are, 1. The greater, rough Spleenwort, or Lonchitis. 2. The spinose, auriculated Fern. 3. The narrower-leaved, closer-set, prickly, and auriculated male Fern. 4. The smaller, prickly male Fern, called, by Ray, Filix lonchitidi affinis. 5. The male Fern, with narrow, deeply-serrated, and thin-set leaves. 6. The pale-stalked, brittlish Dryopteris, with the lower alæ bending downwards. 7. The dwarf, stone Fern, spotted with black dots. 8. The auriculated Lonchitis, with dentated pinnules. 9. The smaller, round, crenated Lonchitis. 10. The betony-leaved Lonchitis. 11. The ramose Lonchitis, with dusty stalks. 12. The small, branched Lonchitis.

Of the Dryopteris kind are the small, fountain Fern of J. Bauhine, and a small, extremely narrow, pinnuled kind, not described by any other author, a native of Pensylvania.

The

The root of the common Polypody is much eſteemed as a purge, and is an ingredient in ſome of the ſhop compoſitions. The root of the male Fern is greatly recommended by ſome againſt the rickets in children, and the leaves of the Dryopteris have the credit of being pectoral: they are ſold in our markets under the name of White Maidenhair, and uſed as ſuch in the ſhop compoſitions.

ACROSTICUM.

ACROSTICUM is a genus of plants, in which the fructifications are collected into cluſters, and cover the whole under ſurface of the leaves.

Linnæus, in his Genera Plantarum, makes this genus include the Acroſticum of authors, and the ruta muraria of Tournefort and others; but, in his Flora Suecica, &c. he arranges the ruta muraria, as we have done, among the ſpecies of aſplenium. It is certain that the fructifications of the ruta muraria do, like thoſe of the acroſticum, cover the whole under ſurface of the leaves; but they are not diſpoſed in an irregular cluſter there, but are formed into lines, as in the aſplenia.

1. *Acroſticum fronde lineari-laciniata.*
The linear-laciniated Acroſticum.

This is one of the moſt ſingular plants we are acquainted with. It's root is compoſed of a vaſt number of capillary, blackiſh fibres; from this there ariſe a number of ſtalks, in a cluſter often not leſs than forty or fifty together. The plant is about three inches high. The ſtalks are extremely ſlender, of a duſky colour toward the bottom, but pale upwards. Toward the top they are each divided into two or three ſegments, ſomewhat broader than the reſt of the ſtalk, and covered with a duſty, ferrugineous-coloured powder. This is formed of the fructifications of the plant, and has much the appearance of that on the back of the leaves of the ruta muraria. The extremities of this plant uſually are bent a little downwards.

This ſpecies is very common on the rocks in Germany, and we have it alſo in Scotland. It uſually grows out of the fiſſures of ſtones, or from between the joints of old walls. C. Bauhine calls it, Filix ſaxatilis corniculata; and Tournefort, Filicula ſaxatilis corniculata

The only ſpecies we know of this genus, beſide that juſt deſcribed, is the tall, digitated Acroſticum of America, which Plumier calls Filicula digitata.

TRICHOMANES.

TRICHOMANES is a genus of plants, in which there appears a turbinated, erect calyx, ſtanding ſingly on the very margin of the leaf, and a ſetacous ſtyle terminating the capſule.

1. *Trichomanes fronde ſupra compoſita petiolo hirſuto.*
The hairy-ſtalk, ſupra decampound-leaved Trichomanes.

The root is fibrous and black. The plant riſes to two feet high, or more; it's main ſtalk is round, hairy, and of the thickneſs of a gooſe-quill; this divides into a multitude of ramifications and ſubdiviſions, ſo that the whole extends to a foot, or more, in breadth: all theſe ramifications of the ſtalk are ſlender, round, and of a gloſſy black. The leaves ſtand alternately; they are an inch long, about a third of an inch broad, and of a lanceolated figure, deeply cut in on the edges: at the extremities of the ſeveral ſegments, which are all hollowed like a cup for that purpoſe; there ſtand a kind of capſules, covered by an operculum, from which there runs out a long rigid hair. It is a native of St Domingo. Plumier calls it, Adiantum ſcandens ramoſiſſimum lacimis retuſis diſſectum. It grows on the barks of old trees.

2. *Trichomanes*

2. *Trichomanes fronde pinnatifida, ſegmentis crenulatis.*
The pinnatifid Trichomanes, with crenated ſegments.

The root is oblong, creeping, thick and fibrated. The plant conſiſts of a ſingle leaf, pinnatifid, and ſomewhat reſembling the common polypody, but that the ſegments are deeply crenated. The pedicle is naked to about the height of three inches; the whole plant is about a foot high, and more than two inches broad in the middle; the extremities of the ſegments are hollowed into a kind of cup, in which ſtand cluſters of the ſeed-veſſels, covered with an operculum terminated by long hair. It is a native of Martinico, Plumier calls it, Polypodium criſpum calyciferum.

3. *Trichomanes fronde decompoſita capſulis rarioribus.*
The decompound-leaved Trichomanes, with four capſules.

The root is of the thickneſs of a packthread, hairy, creeping, and furniſhed with a number of fibres. The plant grows to four or five inches high, and is very tender and delicate. The ſtalk is flat, the leaf decompound, and divided toward the extremities into long, narrow, and obtuſe ſegments. The capſules are large, and covered with an operculum furniſhed with long hair: they are few in number, and are not placed as in the others, at the extremities of all the ſegments, but principally toward the baſes of the leaves. It is a native of many of the Caribbee Iſlands. Plumier calls it, Filicula Vyſcidifera.

THE HISTORY OF PLANTS.

PART III.

Plants uſually called the more perfect ones.

Claſs the Firſt.

MONANDRIA.

Plants which have only one ſtamen in each flower.

THE Monandria are of two kinds; ſome have only one ſtyle in the flower, others have two ſtyles, though but a ſingle ſtamen. The Monandria are hence arranged into two orders. The firſt comprehends thoſe which have only one ſtyle, under the name of Monogynia: the ſecond, thoſe which have two ſtyles, under the name of Digynia.

Claſs the Firſt. Order the Firſt.

MONANDRIA MONOGYNIA.

Plants which have only one ſtamen, and one ſtyle in the flower.

THE Monandria Monogynia differ conſiderably in the ſeveral genera in the fruit. Some of them have capſules formed of three ſeparate cells, others produce only a ſingle ſeed after every flower.

Hence they are to be arranged into two diviſions.

Diviſion the Firſt.

Monandria Mongynia, which have after every flower a capſule, divided into three cells.

CANNA.

THE calyx of the Canna is a perianthium, compoſed of three ſmall lanceolated leaves, which are coloured, which ſtand erect, and are permanent. The corolla is monopetalous, and divided into ſix parts. The laciniæ or ſegments are of a lanceolated figure, and cohere at their baſes: the three exterior ones are erect; the three inferior ones are longer than theſe, and two of them are erect, one reflex.

The ſtamen is a ſingle filament, of a lanceolated figure, very much reſembling the laſt ſegment of the corolla, and placed oppoſite to it, and hollow. The anthera is of a linear figure, and is affixed to the margin of the filament.

The germen of the piſtil is roundiſh, rough, and placed below the receptacle of the flower. The ſtyle is ſingle and enſiform, and of the length and figure of a ſegment of the corolla. The ſtigma is of a linear figure, and adheres to the margin of the ſtyle.

The fruit is a capſule of a roundiſh figure, ſcabrous, coronated, marked with three furrows, and compoſed of three valves, which form as many ſeparate cells in it.

The ſeeds are of a globoſe figure, and not very numerous.

1. *Canna foliis ovatis, utrinque acuminatis, nervoſis.*
The nervous and ovated-leaved Canna.

The root of this plant is of a vaſt ſize; it is oblong, and often of a foot, or more, in diameter; it is very ſucculent, and of a whitiſh colour, and creeps under the ſurface of the ground. The ſtalk is green, ſucculent, round, an inch, or more, in diameter, and ſix or eight feet in height. The leaves are large, and of a beautiful green colour. The nerves very high and ſtrong in them; they ſtand alternately on the ſtalk at conſiderable diſtances: they are twelve inches long, and ſix or eight broad; the flowers are large, and of a beautiful ſcarlet colour. The capſule is large, and echinated on the outſide; and is roundiſh, but has three angles. The ſeeds are large, and of a pale brown.

This elegant plant is not a native of any part of Europe, but Aſia, Africa, and America all produce it, in conſiderable abundance, in ſeveral places. It is not unfrequent with us in the gardens of the curious, but it requires care. Caſpar Bauhine calls it, Arundo Indica latifolia, p. 19. Tournefort, Cannacorus ampliſſimo folio flore rutilo, Inſt. 367. Sir Hans Sloane and others call it, Canna Indica.

2. *Canna foliis lanceolatis, petiolatis, enerviis.*
The petiolated, lanceolated, and ſmooth-leaved Canna.

This is a very beautiful plant. It's root is large, of the thickneſs of a man's arm, fleſhy, whitiſh, and of a ſweetiſh mucilaginous taſte, with a mixture of auſtere. The ſtalks riſe to be four or five feet high; they are round, of the thickneſs of a man's thumb, ſoft and ſucculent, and of a pale green colour: the leaves are large, and of an oblong figure, ſeven or eight inches in length, three in diameter. They are broadeſt in the middle, ſmall at the baſe, and terminate in a point. They are affixed to the ſtalk by ſhort pedicles, and are of a pale bluiſh, or greyiſh-green, colour, and ſmooth ſurface, not marked with ridges by the prominent nerves, as in the other ſpecies. The flowers are very large and beautiful. This, ſo far as is yet known, is only of American origin. It is a perennial plant, like the former, but it ſeldom flowers with us. Linnæus, in the Hortus Cliffortianus, calls it Cannoides; and Dillenius, in the Hortus Elthamenſis, Cannacorus glaucophyllus ampliore flore iridis paluſtris facie.

The other ſpecies of Canna are, 1. The broad-leaved, American Canna, with a deep red, ſhining flower. 2. The Canna, with a yellow ſpotted flower. 3. The narrow-leaved Canna, with a yellow flower, the Albara of Piſo.

The Indians uſe the juice of the Canna root, as an agglutinant and aſtringent.

AMOMUM.

THE calyx of the Amomum conſiſts of ſeveral ſimple, partial ſpathæ, diſpoſed in an imbricated manner. The corolla is monopetalous, conſiſting of a ſhort tube, and a limb divided into three oblong ſegments; the middle ſegment is larger than the reſt, and the ſinus oppoſite to it more open. The nectarium is monophyllous, and inſerted into the large ſinus juſt mentioned: it ſcarce at all appears above the ſegments of the corolla.

The ſtamen is a ſingle filament, of an oblong figure, and like one of the ſegments of the corolla: the anthera is ſimple, and affixed to this.

The germen of the piſtil is roundiſh, and ſtands below the receptacle of the flower. The ſtyle is ſingle, ſlender, and of the length of the ſtamen. The ſtigma is obtuſe; the fruit is coriaceous, of an oval figure, but ſomewhat three-cornered: it is compoſed of three valves, forming as many cells; the ſeeds are numerous and ſmall.

The Amomum comprehends the plant called Zingiber by other authors.

1. *Amomum ſcapo nudo, ſpica ovata.* Ginger.
The naked-ſtalked, oval-ſpiked Amomum.

The root of this ſpecies is tuberous and nodoſe, of the thickneſs of a man's finger, ſomewhat flattiſh, and divided into ſeveral ramifications, of a pale reddiſh colour on the outſide, and white within, and of an extremely acrid and fiery taſte. It creeps under the ſurface of the earth, and does not grow to any great length ſingly. From this root ariſes a ſtalk of the thickneſs of a man's little finger; it is round and tender, ſomewhat larger toward the root than any-where elſe, and in that part it is of a reddiſh colour, elſewhere it is green. It riſes to about ten inches high, and is terminated by a kind of clavated, or oval, ſpike. It is covered with green ſquammæ, reſembling rudiments of leaves, pointed, and reddiſh, at the extremity. The ſpike is very beautiful: it is compoſed of ſcales of a fine gold-yellow, and a bright ſcarlet colour, or elſe of a fine ſhining green, variegated with white. From the ſinus's of theſe ſquammæ, or ſcales, the flowers come forth; they much reſemble, in their general figure, thoſe of our orchis's, and are of a mixt reddiſh and whitiſh colour, and variegated with yellow ſpots. They are ſmall, and but of very ſhort duration, being ſucceeded by others, after they have been but five or ſix hours open.

Theſe ſtalks, or ſcapi, on which the flowers are produced, have no perfect leaves on them; but, beſide theſe, there ariſe alſo, from different parts of the ſame root, other ſtalks, if they may be properly ſo called; theſe are compoſed wholly of the baſes of a multitude of leaves, ſurrounding one another: they grow to two feet, or more, in height. The leaves ſeparate at their tops, and hang down looſe alſo from their ſides. They are about ſix or eight inches long, and an inch or more broad, ſoft to the touch, and pointed at the extremities, and are of a bright green colour.

This ſpecies is a native of the Eaſt Indies: it is frequent in many places there. It is cultivated alſo in ſeveral parts of America to advantage, but it does not ſeem a native there. We have it in ſome of our gardens in the ſtoves; it requires care to keep it alive, and never yet has been brought to flower with us. Plukenet calls it, Zinziber anguſtiore folio, utriuſque Indiæ alumna, Alm. 317. C. Bauhine calls it, ſimply, Zinziber; and Ray, and others, follow his example; Rhede calls it, Juſchi.

2. *Amomum ſcapo nudo, ſpica oblonga obtuſa.*
The naked-ſtalked Amomum, with an oblong, obtuſe ſpike.

The root of this ſpecies is tuberous, of the thickneſs of a man's finger, and of two or three inches in length, covered with frequent protuberances, and divaricated in a very irregular manner. It is of a duſky orange colour on the ſurface, and white within, fibrous, and of an acrid taſte, but much leſs ſo than that of the former ſpecies. The ſtalks, which produce the flowers, ariſe from ſeveral parts of the root: they are tender, ſucculent, and, throughout, of a pale greeniſh colour. Their ſurface is covered with little hollow ſquammæ, or ſcales, reſembling rudiments of leaves, which terminate each in a hard, pale, brown point. At the top of this ſtalk ſtands a ſpike, of near two inches

inches in length, of the thickneſs of a man's thumb in the middle, and ſomewhat ſmaller at each extremity. This ſpike conſiſts of ſmall browniſh leaves, variegated with purpliſh; and, from the ſinus's of theſe, appear the flowers, which are ſmall, and of a pale fleſh colour, ſpotted with a deep red.

The leaves of this ſpecies grow, like thoſe of the former, in cluſters, from other parts of the root; they incircle one another with their baſes, ſo as to form a kind of ſtalk. They are about ten inches in length, and three in breadth, and are rough to the touch. The ſpike of flowers in this ſpecies has a very fragrant and aromatic ſmell, but the root is leſs aromatic, as well as leſs acrid, than that of the other ſpecies.

This is a native of Malabar, and of the Iſland of Ceylon, where it grows in vaſt abundance. We keep it alive in our ſtoves, but it never flowers with us.

The roots of the former ſpecies, or common Ginger, are taken up, after the flowers are decayed: the exterior bark is then taken off, and they are dried for exportation. The Indians eat the leaves, as well as the roots, freſh taken up, in many of their diſhes, and they give the freſh root alone in cholics and flatulencies; we uſe it as a ſtomachic and carminative.

COSTUS.

THE calyx of the Coſtus is a ſimple ſpadix; the ſpathæ alſo are ſimple. The perianthium is very ſmall, compoſed of a ſingle leaf, tridentated at the edge, and ſtands on the germen. The corolla conſiſts of three petals; they are of equal ſize, of a lanceolated figure, hollow, and placed erect. The nectarium is very large; it conſiſts of a ſingle leaf, and is of an oblong figure, tubuloſe, and divided at the extremity into two labia; the lower labium is broad, and longer than the corolla, it's extremity being divided into three ſegments; and the upper labium is ſhort, of a lanceolated figure, and performs the office of a filament, ſupporting a ſingle anthera, which is divided into two parts. The germen of the piſtil is of a roundiſh figure, and ſtands below the receptacle of the flower. The ſtyle is capillary, of the ſame length with the filament. The ſtigma is capitated, compreſſed, and emarginated. The fruit is a roundiſh, coronated capſule, compoſed of three valves, and formed into three cells. The ſeeds are numerous and triangular.

Of this genus there is only one known ſpecies, and, therefore, there needs no diſtinction, or ſpecific name, for it.

COSTUS.

The root of the Coſtus is tuberous and creeping. It runs under the ſurface of the earth for ſeveral yards; it's general thickneſs is about an inch, but it ſwells out into large protuberances, at diſtances from one another; theſe are of the bigneſs of an egg, or more. It's colour is white, it's texture fibrous, but it is very ſucculent, and of a ſweetiſh taſte, with ſomething of the flavour of ginger with it. From ſeveral parts of this root there riſe diſtinct plants; each grows to be five or ſix feet high. The ſtalk is round, three quarters of an inch in diameter, of a blood-red colour, and extremely gloſſy ſurface, jointed in the manner of a reed, and full of a ſpungy pith within. The leaves ſtand alternately, and have no pedicles. They are of an oblong figure, and narrow, eight or ten inches in length, and not more than three in breadth, broadeſt in the middle, and terminated in a point: the middle rib is very prominent on the under ſurface; above there is a furrow at it, and ſeveral lateral ribs are diſtinguiſhable. The colour is a pale green, the ſurface ſmooth and gloſſy. There ſtands one leaf at every joint of the ſtalk, and they are ſoft to the touch, and ſucculent. The ſtalk is terminated by an imbricated head, compoſed of a number of obtuſe, concave ſquammæ, of an oval figure, each ſquamma producing a ſingle flower, and they all remain, after the flowers are fallen: theſe ſquammæ, when the plant flowers in the Indies, are red as coral; when it flowers in our ſtoves, they are green. The flowers are ſmall, and of a pale red with us, much deeper in the Indies. The ſeeds are preſſed cloſely againſt one another; they are, at firſt, bluiſh, afterwards brown, and, when broken, are found to be white within. They have a ſtrong aromatic ſmell, like that of ginger, and yet have very little taſte.

This plant is a native both of the Eaſt and Weſt Indies; Malabar and the Iſland of Ceylon are the places where it is moſt abundant, but it is common enough in the Braſils,

Surinam, and other parts of America. It very rarely flowers with us. The root, when dried, is what is now univerſally received, under the name of Coſtus, in the ſhops: it is not, indeed, the Coſtus of the antients, nor, unleſs the deſcriptions of the Coſtus of their time were more accurate, is it likely we ſhould ever know what was ſo; this, when dried, is of a yellowiſh white, of an aromatic taſte, and ſomewhat acrid and bitteriſh: in ſmell, it reſembles the Florentine iris, having ſomething of the violet ſcent in it. It is eſteemed a pectoral cephalic and uterine; it is certainly an attenuant, and promotes urine and perſpiration. It is an ingredient in many compoſitions, and is uſed in the theriaca, &c. inſtead of the Coſtus of the antients, but it is little known in extemporaneous preſcriptions.

ALPINIA.

THE calyx of the Alpinia is a ſmall perianthium, and conſiſts of a ſingle leaf, divided into three parts: it is placed upon the germen. The corolla is monopetalous, unequal, and, as it were, double; the exterior is trifid, the upper ſegment is hollow, the two ſide ones flat, and it has a tube: the interior is ſhorter, it's edge is trifid, and the lower ſegment of the three hangs out beyond the lateral parts of the exterior corolla; the other two are emarginated. The baſe is bellied, or ventricoſe. The ſtamen is a ſingle filament, much reſembling one of the ſegments of the interior corolla. The anthera is ſingle, and of a linear figure; it adheres to the margin of the filament. The germen of the piſtil is roundiſh, and ſtands below the receptacle of the flower. The ſtyle is ſimple; the ſtigma is obtuſe, and ſomewhat trigonal. The fruit is a fleſhy capſule, of an ovated figure, compoſed of three valves, and containing three cells: the ſeeds are numerous, of an ovated figure, with a prominent, but truncated, apex, and with a caudated baſe; the receptacle is very large and pulpy.

It is an American, deſcribed by Plumier.

MARANTA.

THE calyx of the Maranta is a ſmall perianthium, affixed upon the germen, of a lanceolated figure, and conſiſting of three leaves. The corolla is monopetalous, and of the ringent kind. The tube is oblong, compreſſed, crooked, and oblique. The limb is divided into ſix parts: the alternate exterior ſegments are of an ovated figure, equal in ſize, and ſmall; one ſtands below, two above: the two alternate lateral ſegments are very large, of a roundiſh figure, and repreſent a lower lip; the upper one is ſmall, and bipartite. The ſtamen is a ſingle, membranaceous filament, extremely reſembling a ſegment of the corolla. The anthera is of a linear figure, and affixed to the ſide of the filament. The germen of the piſtil is roundiſh, and is placed beneath the receptacle of the flower. The ſtyle is ſimple, and of the length of the corolla; and the ſtigma is ſomewhat trigonal and bent. The fruit is a roundiſh capſule, ſomewhat obſcurely trigonal, and compoſed of three valves, in each of which there is a ſingle, hard, rugoſe ſeed, of an ovated figure.

It is an American, deſcribed by Plumier; and is nearly allied to the canna, but cannot be joined with it.

CURCUMA.

THE calyx of the Curcuma conſiſts of ſeveral partial, ſimple ſpathæ, which fall off very ſoon. The tube of the corolla is narrow, it's limb is divided into three ſegments, which are of a lanceolated figure and patent. The nectarium is compoſed of a ſingle leaf, of an ovated, but pointed, figure; it is larger than the ſegments of the petal, and inſerted into the larger ſinus, made by it's opening. The ſtamina are five in number, but, as only one of them is of ſervice in the office of generation, or is properly organized for it, the plant ſtill belongs to this claſs. Four of theſe filaments are erect, linear in figure, and barren; the fifth is alſo linear, and reſembles a petal: it is placed within the nectarium, and it's apex is biſid. The germen of the piſtil is roundiſh; the ſtyle is of the length of the ſtamina; the ſtigma is ſimple and uncinated. The fruit is a roundiſh capſule, compoſed of three valves, and contains three cells, in each of which there are a great number of ſeeds.

Tournefort has erroneouſly made the Curcuma a ſpecies of canna; but this ſeems to have been owing to Bontius, who has figured the common canna under the name of Curcuma.

Curcuma. The root of Curcuma is ſometimes long, ſometimes roundiſh, and, from this difference of figure, has been ſuppoſed to belong to two ſpecies of plants; nay, the long-rooted and round-rooted Curcuma are figured as two plants, in the Hortus Malabaricus, under the names of Manjella Kua, and Manja Kua; but later obſervations confirm the ſuſpicion of their being the roots of the ſame ſpecies, which is indeed, the only ſpecies of this genus.

CURCUMA. Turmerick.

The root of the Curcuma is tuberous and creeping: it is of the thickneſs of a man's finger, frequently knotted and geniculated. It runs juſt under the ſurface, and has a great number of fibres, tolerably thick and ſtrong, deſcending from the joints. On the outſide it is of a pale colour, or of a mixt white and brown, and yellow: within it is of a fine yellow colour. It is rough on the ſurface, and compact within, conſiderably heavy, and of a fragrant ſmell, and a bitter, acrid taſte, with ſomewhat fatty in it. From every joint of this root there ariſe three, four, or more leaves; they are very like thoſe of the canna, about ſeven inches long, and four or five broad, largeſt in the middle, and terminate in a point: they are of a bright green colour, and firm texture. From other parts of the roots, and eſpecially from the more healthy and robuſt ones, there ariſe ſeparate flowering ſtalks: theſe are tender, ſucculent, round, and of the thickneſs of a gooſe-quill, and are of a pale green colour. Each grows to ſeven or eight inches high; it's lower half is naked, but the upper part is formed into a thick ſpike: this is compoſed of a multitude of little leaves, green at the firſt, but afterwards of a fine yellow, or of an orange colour, or reddiſh. Each leaf is half an inch broad at the baſe, and gradually diminiſhes thence, till it terminate in a point, which is uſually bent downwards. Theſe leaves are placed in a ſquammous manner, over one another, and, in the baſe of each, there is lodged a tough, thick, viſcous matter: from the hollows between theſe ſquammæ there are produced oblong flowers, ſomewhat reſembling thoſe of the canna in ſhape, but not more than a third part as large. They are ſometimes yellowiſh, ſometimes of a pale purple, but the colour is very uncertain. Herman ſays that the flowers conſiſt of four petals each, but he errs extreamly in this. The ſeed veſſels, which ſucceed theſe, are ſmall and membranaceous: the ſeeds are ſmall alſo and round.

The Curcuma is very common in Malabar, in the Iſland of Ceylon, and in many other parts of the Eaſt Indies. Breynius calls it, Curcuma foliis longioribus et acutioribus; and, in the Hortus Malabaricus, it is called, Manjella Kua.

The root of the Curcuma is taken up for uſe, as ſoon as the flowering ſtalks are faded. It is cut into pieces of an inch or two, or more, in length, and dried in the ſun. The Indians themſelves are very fond of it, in ſoups, and other diſhes. We uſe it much as an attenuant and deobſtruent: in all obſtructions of the viſcera it is of great ſervice; but it is particularly famous in jaundices: the dyers alſo uſe it in great quantities for a yellow colour.

KOEMPFERIA.

THE calyx of the Kœmpferia is a ſimple ſpatha, conſiſting of only one leaf, and opening on one ſide. The corolla conſiſts of a ſingle petal: the tube is long and thin; the limb is plain, and divided into ſix parts: three of the ſegments are lanceolated in figure, and equal in ſize; two other of the ſegments are of an ovated figure, and the ſingle lower one is divided into five parts, which are each vertically cordated: all the ſegments are equal in length. The ſtamen is a ſingle filament, of a membranaceous ſtructure, and ſomewhat ovated figure, and is emarginated. The anthera is of a linear figure; it grows to the filament all it's length, and ſcarce emerges out of the tube of the corolla. The germen of the piſtil is roundiſh. The ſtyle is of the length of the tube, and the ſtigma is obtuſe. The fruit is a roundiſh, and ſomewhat trigonal capſule, compoſed of three valves, and containing three cells, in each of which there are a great number of ſeeds.

There is but one known ſpecies of this genus. It is deſcribed by Burman in his Ceylon, under the name of Arobrebis, and by Kœmpfer in his Japan. It very rarely produces it's fruit, nature contriving to propagate it by germina placed near the root.

KOEMPFERIA. Galangal.

The root of the Kœmpferia is tuberous and creeping: it runs under the ſurface in various directions, and is crooked and knotty. It's general thickneſs is that of a man's finger, but it is not unfrequently of an inch in diameter; it is ſurrounded with circular ridges in many places, and ſwells into frequent protuberances: it's colour is a pale browniſh red on the ſurface, and yet paler within; it's ſmell aromatic; it's taſte extreamly acrid and pungent; it emits fibres in great number, from ſeveral parts, and propagates itſelf a great way, in a little time, by ſpreading; from the ſeveral knots of the root ariſe the leaves; there grow two of them together, they ſtand on erect, broad, and flattiſh, hollow pedicles: they ſtand oppoſite to one another, and are of a roundiſh figure, and hollowed with a ſmall ſinus at the baſe; they are of a thick, fleſhy ſtructure, and bright green colour, except at the edge, where they are generally purpliſh. They are of a fine aromatic ſmell, and acrid taſte. The flowers ſtand on long pedicles, which ariſe from the center, between the two leaves. They are white within, and toward the baſe of a deep purple, and in ſome parts yellowiſh and greeniſh. Every flower laſts, from the time of it's opening, to the evening when it falls off, and in the morning after a freſh ſet appear.

This plant is frequent in Ceylon, Malabar, and many other parts of the Eaſt Indies. It's root is the Galangal of the ſhops. The apothecaries, and even the people in general who have written of the Materia Medica, diſtinguiſh two kinds of Galangal, the greater and the leſſer; the latter is, of the two, much the ſtronger, and more acrid, and it has been ſuppoſed that they were the roots of two different plants, but they are, in reality, both the root of this ſpecies, and the larger are only the older and leſs vigorous ones. We have the plant in ſome of our gardens, but it requires a ſtove heat, and very ſeldom flowers with us; it never produces any fruit in our country; rarely, where native.

It is deſcribed in the Hortus Malabaricus, under the name of Katsjula-Kelenger. Kœmpfer calls it, Wanhem; and Rudbeck, Orchis abortiva bifolia. The root is a carminative and ſtomachic; it is a common ingredient in bitter infuſions, and enters ſome of the ſhop compoſitions.

Claſs the Firſt. Genus the Firſt.

Diviſion the Second.

Monandria Monogynia, which produce only a ſingle ſeed after every flower.

BOERHAAVIA.

THE calyx of the Boerhaavia is ſcarce diſtinguiſhable: it is a mere margin, very ſmall, and ſtanding as a corona on the head of the germen. The corolla conſiſts of a ſingle petal; it is campanulated, erect, and of a quinquangular figure. It is divided into five ſegments, which are ſhort and emarginated. The ſtamen is a ſingle ſhort filament, on which is affixed a ſmall, roundiſh anthera. The germen of the piſtil is placed below the receptacle: the ſtyle is capillary and erect, and the ſtigma is obtuſe. The fruit is a turbinated capſule, furrowed on the ſurface, and forming only one cell within, in which there is lodged a ſingle ſeed.

This genus comprehends the Boerhaavia, and the Antaniſophyllum of Vaillant. Linnæus has placed it in his Genera Plantarum among the triandria, and deſcribed it as having three ſtamina, but he had then only ſeen a dried ſpecimen of it; he afterwards ſaw it in flower in the Upſal Garden, and, in his Catalogue of the Plants there, has placed it among the Monandria.

There is only one known ſpecies of this genus.

BOERHAAVIA.

The root of the Boerhaavia is oblong, and of an inch, or more, in diameter, and conſiſts of a hard, internal part or core, and a ſoft bark of the thickneſs of a ſhilling, or more. It is of a tolerable ſmooth ſurface, and duſky colour. The ſtalk is round, geniculated,

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Costus
The Costus Plant

Curcuma

Kæmpferia
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Salicornia

B. Cole Sculp.

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The Costus Plant

Kæmpferia

The Galangal Plant

Curcuma

Salicornia

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geniculated, diffuſe, and ſpreading, and of a gloſſy ſurface, and red colour. The leaves are of an ovated figure, and thick, fleſhy ſtructure: they are of a bright green colour, and reddiſh at the edges. The flowers ſtand towards the top of the plant; in the alæ of the leaves they are of a pale red on the outſide, and of a deeper, or purpliſh, red within, eſpecially near the mouth. The ſtyle is of a deep purple; the ſtamen is alſo purple, the anthera yellow.

The plant is a native of the Eaſt Indies, principally about Montan. It loves a rocky or ſandy ſoil: it ſucceeds very well in our ſtoves, and produces it's flowers and fruit there. Vaillant calls it, Antaniſophyllum ſolanifolium majus. Rheede, Talu Dauca; Linnæus, Boerhaavia diffuſa, and Boerhaavia foliis ovatis.

The Indians uſe the outer part, or bark of the root, as a purge, but it is not known as a medicine in Europe.

HIPPURIS.

THE calyx of the Hippuris is ſcarce diſtinguiſhable. It conſiſts only of two extreamly ſmall margins, ſtanding oppoſite to one another, on the head of the germen. There is no corolla: the ſtamen is a ſingle filament, fixed on the receptacle of the flower. The anthera is very ſlightly bifid. The germen of the piſtil is oblong, and placed under the receptacle: the ſtyle is ſingle, ſubulated, and erect; it is placed within the ſtamen, and is longer than it. The ſtigma is acute; there is no pericarpium, but after every flower there comes a ſeed, which is roundiſh and naked.

This genus comprehends the Limnopeuce of Vaillant, and the Pinaſtella of Dillenius. There is only one known ſpecies of it.

HIPPURIS.

The root of the Hippuris is compoſed of a number of reddiſh, or blackiſh, articulated, oblong parts, which ſpread themſelves every way on, or juſt under, the ſurface of the mud, and ſend down from every articulation a number of capillary fibres. The ſtalks ariſe from ſeveral parts of the root, ſometimes ſingly, ſometimes three or four together. They are round, jointed, like ſmall reeds, and of the thickneſs of a large ruſh: they ſtand erect, and are largeſt at the baſe, whence they gradually grow ſmaller to the top, where they terminate in a point. The joints ſtand very cloſe, and the whole ſtalk is ſmooth, not ſtriated: the leaves are ſhort, and ſtand in form of rays round the ſtalk, at the ſeveral joints. The whole plant grows to two feet high, and the leaves are narrow, and ſomewhat reſemble thoſe of the firs, from which, and from the regular growth of the plant, many have compared it to the pines and firs. The leaves are of a pleaſant green colour, and round about the articulations there lie ſingle naked ſeeds, of an oblong figure, and reddiſh brown colour; ten or twelve of theſe often grow round each articulation.

This plant is a native of England, but it is not common with us. I have obſerved it in Leiceſterſhire, and in Yorkſhire; it ſometimes grows in the waters, ſometimes on the mud, about their edges. Cordus calls it, Limnopeuce, Hiſt. 150. Ruppius, Pinaſtella ſurrectior. C. Bauhine, Equiſetum paluſtre brevioribus foliis polyſpermon; and Rudbeck, Polygonum polyſpermum. Many of the old writers have alſo called it, Polygonum fœmina.

Moſt of the botanical authors have confounded the equiſeta with this, and this with the equiſeta, but they are very diſtinct genera. The charæ have alſo as erroneouſly been confounded with this genus, and with the equiſeta, though widely different from both.

SALICORNIA.

THE calyx of the Salicornia is of a tetragonal figure, truncated, bellied out, and permanent. There is no corolla. The ſtamen is a ſingle, ſimple, capillary filament: the anthera is roundiſh. The germen of the piſtil is of an oblong, ovated figure: the ſtyle is ſimple, and placed under the ſtamen, and the ſtigma is bifid.

There is no pericarpium, but the calyx becomes more ventricoſe, and contains a ſingle ſeed.

1. *Salicornia internodiis brevioribus.*
The ſhort-jointed Salicornia.

This ſpecies is large and robuſt; it's root is ſmall, oblong, and ſurrounded with a great number of fibres: it's ſtalks are hard and woody toward the lower part, green and ſucculent toward the upper, and are throughout compoſed of a great number of very ſhort joints, inſerted into one another, in the manner of ſo many cups. The main ſtalk ſends off a great number of branches, and towards it's top divides into a great many others; but theſe have no leaves, but only ſmall branches like themſelves, round and jointed, growing from them; they are round, ſucculent, and of a brackiſh ſaline taſte. The flowers are very minute, and of a yellow colour; they ſtand only on the tops of the branches, and laſt but a little while.

This ſpecies is perennial, and is not a native of England. It is frequent about the coaſts of the Mediterranean. The next ſpecies to be deſcribed greatly reſembles it in it's ſtructure, and is often miſtaken for it; and, by this miſtake, this ſpecies has been called a native with us.

C. Bauhine calls it, Kali geniculatum majus. J. Bauhine, Kali geniculatum ſive Salicornia; and moſt of the other writers, ſimply, Kali geniculatum, by that means confounding it with the other.

2. *Salicornia internodiis longioribus.*
The longer-jointed Salicornia.

This ſpecies greatly reſembles the former, but it is leſs robuſt, and is an annual plant. It's root is conſiderably large for the ſize of the plant, of an oblong figure, and whitiſh colour, and furniſhed with a conſiderable number of thick and ſtrong fibres. The plant uſually riſes to eight or ten inches in height, ſometimes to more. The ſtalk is ſucculent, and compoſed of cylindric joints, inſerted into one another; theſe joints are longer than thoſe of the former, though that be ſo much the larger plant: from the ſides of the branches there iſſue others, and from thoſe yet others, till the whole have a very ramoſe figure; the whole plant is of a fine bright green colour, and is ſoft and tender down to the very bottom: the ſtalks all the way are thicker at the joints than elſewhere, and the whole plant has a brackiſh, but not diſagreeable, taſte: the flowers grow only on the tops of the branches; they are ſmall, and of a pale green colour; the ſeeds are black and oblong. This ſpecies is extreamly common with us on the ſea-coaſts, and almoſt through the world. Our people have a way of gathering it, and pickling it, under the name of Sampire. C. Bauhine calls it, Kali geniculatum alterum vel minus; and J. Bauhine, Cali Arabum aliud.

Claſs the Firſt. Genus the Second.

MONANDRIA DIGYNIA.

Plants which have only one ſtamen, but have two ſtyli in each flower.
Of theſe there are but three known genera.

CORISPERMUM.

THE Coriſpermum has no calyx. The corolla conſiſts of two petals, which are compreſſed, crooked, pointed, equal in ſize, and placed oppoſite to one another. The ſtamen is a ſingle, long, crooked filament; the anthera is ſimple. The germen of the piſtil is roundiſh, and compreſſed. The ſtyles are two in number; they are capillary and crooked. The ſtigmata are acute. The fruit is a roundiſh capſule, compreſſed, bilocular, and has a furrowed edge: the ſeeds are of an oblong figure, and ſtand ſingle.

This genus comprehends the Stellaria of Dillenius, the Coriſpermum of Juſſieu, and the Rhagroſtis of Buxbaum. It is liable, however, to great variation in ſome of the parts: the eſſential and certain diſtinction is in the corolla. The fruit ſometimes varies in being bilocular and tetraſpermous, and it is ſometimes gymnoſpermous; and the

ſex

ſex varies yet more, it being ſometimes hermaphrodite, ſometimes monæcious, ſometimes diæcious, ſometimes polygamis. As the corolla, however, is invariable, the genus may always be diſtinguiſhed.

Coriſpermum foliis oppoſitis.

The Coriſpermum, with leaves placed oppoſite.

The root of this ſpecies is ſmall, and creeping, and is uſually affixed in the mud at the bottom of waters not very deep; from this grows ſeveral ſtalks very thin, tender, and flexile, which riſe up till they reach the ſurface of the water, where great tufts of them uſually appear together, and the upper leaves of each diſpoſe themſelves in a ſort of radiated manner, ſo as to reſemble a ſtar; and hence it obtained the name of Stellaria Aquatica, and Water Starwort, among the ordinary botanical writers. The leaves ſtand in pairs on the ſtalks, oppoſite to one another, and every pair at the diſtance of about three quarters of an inch from the other, from the ſame joints, whence the leaves iſſue; there uſually grow alſo a few white fibrous roots. The ſtalks grow, according to the different depth of the water, to a foot or two in length, or to no more than five or ſix inches; they are uſually ſimple, ſometimes branched. The leaves are of a bright green colour, about half an inch in length, and a ſixth of an inch in breadth. They are broadeſt in the middle, and thence gradually grow ſmaller toward each extremity. The cluſters of leaves on the ſurface of the water conſiſt of ſeveral leaves, broader than the others, and laid in a radiated manner over one another, the inner ones growing gradually ſhorter and ſhorter to the center. The flowers ſtand in the alæ of the leaves, two at a joint. They are ſmall, white, and the petals are ſo bent, that they almoſt meet one another. The whole plant is of a very tender and delicate ſtructure.

It grows abundantly in almoſt all our ponds and ditches, covering ſpots of them often of two or three yards diameter. Parkinſon, Gerrard, and the reſt, call it, Stellaria aquatica; and J. Bauhine, Alſine aquis innatans foliis longiuſculis. It varies in it's manner of growth ſo extreamly, as to have been miſtaken by authors for ſeveral ſpecies, and deſcribed by them as ſuch. The plant, in it's moſt natural ſtate, produces leaves of an elliptic, oblong figure. One of the varieties, eſteemed a different ſpecies by authors, is that with leaves bifid at the ends. The authors, who erected a new ſpecies out of this variety, did not give themſelves the pains to examine the plant in it's common ſtate, in which it's lower leaves are always bifid in this manner at the extremity; and the whole difference between the new ſpecies and that was, that in the one only the lower leaves were thus emarginated, in the others all. This variety is uſually found in autumn, in ponds, where it has grown under water in the ſpring, and the water, in the heat of ſummer, has been dried up, and the plant deſtroyed down to the root: in this caſe it grows again on the ponds filling with freſh water; and it's firſt ſhoots in this ſtate always have narrow linear leaves, bifid at the end, like the lower leaves of the other plants. Another variety is the ſhorter and rounder-leaved plant; in this ſtate it is ſmall, and creeps on the ſurface of the mud, in places where the water has been dried up, or in places where the ſeeds have been received, though never covered with water in theſe places: in this caſe the ſtalk takes root at every joint, and it's leaves are ſmaller, ſhorter, and roundiſh.

The firſt of theſe varieties is deſcribed in the Fl. Pr. under the name of Lenticula paluſtris anguſtifolia folio in apice diſſecto; and by Petiver, in Ray's Synopſis, under that of Stellaria aquatica longifolia; and by Ray, under that of Stellaria aquatica foliis longis tenuiſſimis. The other is called by Dillenius, Cat. Giſſ. Stellaria minor et repens; by C. Bauhine, Lenticula paluſtris bifolia fructu tetragono; and by Pliny, Callitriche.

Theſe are evident varieties of the common Coriſpermum, firſt deſcribed; but there are, however, two really diſtinct ſpecies, which will be eaſily diſtinguiſhed by their names. The firſt is the Coriſpermum foliis alternis, called by Joſſieu, Coriſpermum hyſſopifolium; and by Buxbaum, Rhagroſtis ſemine paſtinachæ. This grows on the ſandy ſhores in Tartary, about the Volga. The ſecond is the Coriſpermum glabrum majus longiſſimis foliis of Amman; the Rhagroſtis foliis arundinaceis of Buxbaum, found alſo on the ſhores of the Volga, and in many other places in Tartary. Linnæus calls the firſt of theſe two, Coriſpermum floribus lateralibus; the latter, Coriſpermum ſpicis ſquarroſis. They are both annual, but the latter is larger and more procumbent; it's ſtalk ſmooth, whereas it is rough in the other: the leaves not only larger,

but

but more robuſt; and the top of the branches more imbricated with leaves, and as it were ſpiked.

Linnæus has thought of dividing this genus into two, from the difference of the fruit, calling the Stellaria of Dillenius, which has four ſeeds in every fruit, Callitriche; and the Coriſpermum of Juſſieu and Rhagroſtis of Buxbaum, which have only ſingle ſeeds, Coriſpermum: but the varieties in the flower, as well as this in the fruit, are ſo great, that it is of little conſequence, though juſt and exact. In the Coriſpermum foliis alternis, the loweſt flower uſually has four ſtamina, the ſecond three, the third two, and the reſt only one each. So that the ſame plant has the characters not only of ſeveral genera, but even of ſeveral claſſes.

BLITUM.

THE calyx of the Blitum is a perianthium, conſiſting of one leaf divided into three parts, and is permanent and patent; the ſegments are of an oval figure, equal in ſize, and two of them gape open more than the reſt. There is no corolla; the ſtamen is a ſingle ſetaceous filament, longer than the cup, and placed erect within the intermediate ſegment. The anthera is didymous. The germen of the piſtil is oval, and pointed: the ſtyles are two in number; they are erect, of the length of the ſtamen, and they gape open: the ſtigmata are ſimple; the fruit is a baccated calyx; it is of an oval figure, and ſomewhat compreſſed. The ſeed is ſingle, of a globular figure, compreſſed, and of the ſize of the capſule.

This genus comprehends the Chænopodio-Morus of Boerhaave, and the Morocarpus of Ruppius.

1. *Blitum capitellis ſpicatis terminalibus.*
The Blite, with ſpicated, terminatory heads.

The root of this ſpecies is conſiderably large, of an oblong figure, and white colour, ſoft and fleſhy, and of an agreeable taſte. From this there uſually ariſe ſeveral ſtalks together: they are round, ſtriated, of a deep colour, and conſiderably thick; they grow to ten or twelve inches high, and are very much branched. They uſually are in part procumbent, but the half, or more, of the ſtalk generally riſes erect. The leaves ſtand on long pedicles; they are of a triangular figure, like thoſe of ſpinach, and ſtand irregularly on the ſtalks: the lower ones are ſomewhat dentated round the edges, the upper ones are even. The flowers and fruits grow on the tops of the branches. The flowers are ſingly ſmall, and inconſiderable, but with the fruit in the cluſter they appear very ſingular; the whole reſembles very much a mulberry or raſpberry, and adheres very firmly to the ſtalk; it is of the bigneſs of a nut, of a fine red colour, and full of juice, much reſembling red wine in colour. The whole cluſter of the fructifications makes a kind of double globules, firmly fixed to the ſtalk without any pedicles.

This ſpecies is not a native of England, but it is not uncommon in our gardens. It is an annual but a ſufficiently hardy plant, eaſily raiſed from ſeed, and ſtanding in the open ground. It is a native of Tyrole, and the country thereabouts. Boerhaave calls it, Chænopodiomorus major. Haller, Chænopodiomorus foliis pene integris. Ruppius, Morocarpus major; and Ray, Atriplex baccifera.

2. *Blitum capitellis ſparſis lateralibus.*
The Blite, with ſparſed lateral heads.

The root of this ſpecies is oblong, as thick as a man's finger, and of a white colour, and ſweet taſte; from this there riſe uſually five or ſix ſtalks, ſometimes only a ſingle one. The ſtalk is ſomewhat ſtriated, and very ramoſe, dividing uſually almoſt immediately from the baſe into three or four parts. Theſe grow to a foot, or more, in length, and each ſends out a great number of branches, ſo that the whole plant is very ramoſe; the ſtalks are in part procumbent, in part erect. The leaves ſtand irregularly on the ſtalks; they are triangular, hoary, and ſerrated round the edges. The fructifications grow in cluſters, reſembling ſmall mulberries, not on the extremities of the

the ſtalks, but on it's ſides; and in the alæ of the leaves they are juicy, and of a fine red colour, and give a great beauty to the plant. This ſpecies is a native of Spain, Italy, and Tartary; it's fruit is ripe in Auguſt. It is kept in ſome of our gardens, but not ſo frequently as the former ſpecies. Cluſius calls it, Atriplex ſylveſtris baccifera. C. Bauhine, Atriplex ſylveſtris mori fructu; and Amman, Blitum fragiferum, maximum, polyſpermum.

Claſs the Second.

DIANDRIA.

Plants which have in every flower two ſtamina.

THE Diandria are of three diſtinct kinds; ſome have only one ſtyle in the flower, others have two, and, finally, others have three ſtyles.

The Diandria are hence arranged into three orders: the firſt comprehending thoſe which have only one ſtyle, under the name of Monogynia; the ſecond, thoſe which have two ſtyles, under the name of Digynia; and the third, thoſe which have three ſtyles, under that of Trigynia.

Claſs the Firſt. Order the Firſt.

DIANDRIA MONOGYNIA.

Plants which have only one ſtyle, and two ſtamina in each flower.

THE Diandria Monogynia differ very conſiderably in the ſeveral genera, in regard to the corolla and the fruit. Some of them have regular, others irregular corollæ; and, of the latter, ſome have the ſeeds contained in capſules, others have them naked.

Diviſion the Firſt.

Diandria Monogynia, which have regular corollæ.

NYCTANTHES.

THE calyx of the Nyctanthes is a monophyllous perianthium, very ſmall, of a cylindric figure, lightly divided into eight ſegments, or denticulæ, of a ſubulated figure, and permanent. The corolla conſiſts of a ſingle petal, and is of the hypocrateriform kind. The tube is cylindric, and longer than the cup: the limb is plane, divided into eight ſegments of an oblong figure, and patent. The ſtamina are two extreamly ſmall filaments affixed to the receptacle, and of a ſubulated figure: the antheræ are erect, and ſomewhat acute: the germen of the piſtil is roundiſh and depreſſed. The ſtyle is ſimple, of the length of the tube: the ſtigmata are two, and are erect. The fruit is a didymous berry, of a roundiſh figure, and contains two cells. The ſeeds are roundiſh and large, and one only is contained in each cell.

1. *Nyctanthes foliis inferioribus cordatis obtuſis, ſuperioribus ovatis acutis.* **Arabian Jaſmine.**

The Nyctanthes, with the lower leaves cordated and obtuſe, and the upper ones ovated and acute.

This elegant little ſhrub does not riſe to more than two or three feet high, and often trails upon the ground, or winds about other things. It's bark on the trunk is grey, and full of cracks; the branches iſſue two together, oppoſite one to the other; they are round, ſomewhat hairy and tender, ſometimes wind round other things, ſometimes not. The firſt leaves which appear in the ſpring are cordated, obtuſe, and almoſt emarginated; thoſe which appear afterwards in the ſummer are ovated, and acute; they all ſtand on pedicles, and are nervous, ſmooth at the edges, and not hairy on either ſide, except that underneath, juſt at the ramifications of the veſſels, there are ſometimes a few hairs: their petioles are crooked, and ſeem to be jointed in the mid-

dle; the leaves fall off by the petioles breaking at this joint, and, in conſequence of this, there remains a part of it on the branches, which thence appear as it were ſpinoſe; at the extremities of the branches ſtand the flowers in cluſters; three, five, or nine flowers uſually ſtand together; they are large and white, each has it's ſeparate pedicle. They ſmell extreamly ſweet, ſomewhat like the lilly of the valley-flower, but with a flavour of the citron among it: they ſmell much ſweeter in the night than at any other time.

This ſpecies is a native of Malabar, and ſome other parts of the Eaſt Indies. We have it in ſome of our gardens. It requires a ſtove heat, and flowers with us, but very ſeldom ripens it's fruit here. It has been generally called, Jaſminum Arabicum; and the firſt oil or eſſence of jaſmine, or jeſſamy, we were acquainted with, was diſtilled from the flowers of this ſhrub, not from jaſmine. Ray calls it, Sauchac Arabicum, ſive jaſminum Arabicum. Cluſius gives it the ſame name, with the addition of Sive ſiringa Arabica. In the Hortus Cliffort. it is called, Nyctanthes caule volubili foliis ſubovatis acutis; and, in our Gardener's Catalogue, Jaſminum Arabicum foliis Limonii conjugatis.

2. *Nyctanthes foliis omnibus lanceolatis.* **Indian Jaſmine.**
The Nyctanthes, with all the leaves lanceolated.

This ſpecies is larger and more robuſt than the former; it grows to ſix feet high, and is very much branched: the young branches are covered with a fine down, the older are hard, geniculated, and covered with a brown cracked bark. The leaves grow in pairs, and are oblong and lanceolated, broadeſt in the middle, and terminating in a very long, narrow point. They are of a ſhining, gloſſy, green colour, and are ſmooth both on the upper and under ſurfaces. They have no ſmell, but are of a very bitter taſte. The flowers are large and white, of a fine fragrant ſcent, and they uſually ſtand three or five in a cluſter. The fruit is a ſmall black berry, conſiſting of a pulpy matter, covered with a very thin ſkin, and containing one ſeed.

This is a native of Malabar, Java, and Ceylon, and has not, that I know of, been yet raiſed in any of our gardens. Ray calls it, Jaſminum Indicum flore polypetalo, exalbido, fructu minori. Rheede, Tsjiregam mulla.

The other ſpecies of the Nyctanthes are, 1. The larger-fruited Nyctanthes, or Kater Tsjiregam mulla of the Hortus Malabaricus. 2. The red-edged Nyctanthes, or Kater pitsjegam muller of the H. M. and 3. The larger-leaved, weak-ſtalked Nyctanthes. All theſe are natives of the Eaſt Indies. We ſometimes meet with ſpecimens of them prepared upon the ſpot; and ſome of them have been kept in the ſtoves of the late Lord Petre, and other curious perſons.

JASMINUM.

THE calyx of the Jaſminum is a tubulated, oblong perianthium, conſiſting of a ſingle leaf, divided into five ſhort ſegments at the edge, and ſtanding erect. The corolla conſiſts of a ſingle petal. The tube is cylindric and long; the limb plane and divided into five ſegments. The ſtamina are two ſhort filaments; the antheræ are ſmall, and are hid within the tube of the corolla. The germen of the piſtil is roundiſh; the ſtyle is capillary, and of the length of the ſtamina, and the ſtigma is bifid. The fruit is a ſmooth oval berry, containing two cells: the ſeeds are two in number; they are large, of an oval, oblong figure, convex on one ſide, and flat on the other, and they are covered with a membrane.

The figure of the flower varies; it is ſometimes acute, ſometimes obtuſe, but the number and proportion of the ſtamina is regular and conſtant; the fruit is a ſingle berry in ſome, and a double one in others.

1. *Jaſminum foliis oppoſitis pinnatis.* **Common Jaſmine.**
The Jaſmine, with oppoſite, pinnated leaves.

This is the common Jaſmine. It is a weak ſhrub; it's branches riſe to ſix, ſeven, or eight feet high, if ſupported; they are thin and tough, and the young ones are green, the older browniſh. The leaves are pinnated; there uſually are three pinnæ on each ſide the middle rib, and an odd leaf at the end. The pinnæ are all ſhort, and pointed

pointed at the ends: they are ſmooth, and of a deep green colour. The flowers grow, as it were, in an umbel, and are of a very ſweet ſmell. It rarely produces it's fruit with us; where it does, the berry is greeniſh, and the ſeeds round. This ſhrub, though now ſo common with us, and hardy enough to bear ſo well the ſeverity of our climate, is originally of Eaſt Indian origin. The oil of Jaſmine, or, as it is vulgarly called, eſſence of Jeſſamy, is now uſually prepared from the flowers of this ſpecies. C. Bauhine calls it, Jaſminum vulgatius flore albo; others, Jaſminum vulgare.

2. *Jaſminum foliis alternis, ternatis, pinnatiſque, ramis teretibus.*
The round-branched Jaſmine, with alternate, ternate, and pinnated leaves.

This ſpecies grows to four feet, or more, in height, when properly ſupported. It's branches are reddiſh, and the young ſhoots are rounded, except for two ſtriæ, on the ſides, from the petioles or pedicles of the leaves. The leaves uſually ſtand three together, ſometimes ſeven, in a pinnated manner. They are large, and of an oblong figure, ſomewhat reſembling thoſe of the pomegranate, ovated, ſcarce at all pointed, of a fine ſhining green colour, and not at all dentated at the edges. The flowers ſtand in a ſort of umbels, like thoſe of the common Jaſmine; they are large, of a fine ſhining yellow colour, and extreamly ſweet ſmell; theſe are ſucceeded by oblong berries, green, at the firſt, but yellow and pellucid, when ripe.

This ſpecies is a native of the Eaſt Indies, and of ſome other places: it is not uncommon in our green houſes. Ferrarius calls it, Jaſminum Indicum, flavum, odoratiſſimum, a name moſt other authors have borrowed for it. Linnæus, in the H. C. calls it, Jaſminum foliis alternis, ternatis, obtuſis.

3. *Jaſminum foliis alternis, ternatis, pinnatiſque, ramis angulatis.*
The angular-branched Jaſmine, with alternate, ternate, and pinnated leaves.

This riſes to be a ſhrub of the ſame kind of ſtature with the common Jaſmine. It's branches are tender, green, and flexile, and a little angulated. The leaves are in general ternate, but in the middle of the branches pinnated, and compoſed of ſeven pinnæ: the lateral leaves are oval, and pointed, and are twice as ſmall as the terminating leaf, which is large, of an oval figure, pointed at the extremity, and narrow at the baſe. They are all of a firm ſtructure, ſmooth and gloſſy. The flowers are yellow, and ſmell very ſweet: they ſtand in a kind of umbels, as thoſe of the other ſpecies do, and the ſegments are obtuſe. The fruit is a moderately large, oblong, black berry. This ſpecies is found wild in many parts of the Eaſt Indies. It is not uncommon in our green houſes: it is an ever green, and flowers very plentifully with us.

C. Bauhine calls it, Jaſminum humile luteum. J. Bauhine, Gelſeminum ſive Jaſminum luteum. Linnæus, in the Hort. Cliffort. Jaſminum foliis alternis, ternatis, acuminatis.

4. *Jaſminum foliis alternis, ternatis, ſimplicibuſque, ramis angulatis.*
The alternate, ternate, and ſimple-leaved Jaſmine, with angulated branches.

The root of this ſpecies is remarkable for it's creeping: it runs under the ſurface to a great diſtance; from this there ariſe a number of ſhoots or ſeparate plants; theſe grow to be five or ſix feet high: the ſtalks are angular and green, and ſend out many branches. On theſe grow the leaves, ſometimes ſingle, but uſually three on a pedicle. They are ſmall, and in ſome meaſure reſemble thoſe of rue. The flowers ſtand on the tops of the branches; they are yellow, and like thoſe of the common Jaſmine. They are ſucceeded by large round berries, red, when ripe. This ſpecies is a native of France, Spain, and Italy: it is common in the hedges about Montpelier. It is not wild with us, but is common in our gardens. C. Bauhine calls it, Jaſminum luteum vulgo dictum bacciferum. J. Bauhine, Trifolium fruticans quibuſdam polemonium flore luteo.

luteo. Others call it, Polemonium ſimply, or Polemonium flavum and luteum; Dodonæus, Jaſminum fruticans.

The other ſpecies of Jaſmine are, 1. The large, flowered, Spaniſh Jaſmine. 2. The white Jaſmine of the Azores Iſlands. 3. The broad-leaved, Indian Jaſmine. 4. The bay-leaved American Jaſmine, with extremely ſweet flowers. 5. The tobacco-leaved, arboreſcent Jaſmine, with white flowers. 6. The nightſhade-leaved American Jaſmine, with bluiſh-black berries; and, 7. The creeping, violet-leaved Jaſmine.

LIGUSTRUM.

THE calyx of the Liguſtrum is a perianthium, conſiſting of one leaf, of a tubulated form, very ſmall, and divided into four ſhort ſegments at the top, erect and obtuſe. The flower conſiſts of a ſingle petal, and is of the infundibuliform kind. The tube is of a cylindric figure, and is larger than the cup. The limb is patent, and is divided into four oval ſegments. The ſtamina are two ſimple filaments, placed oppoſite to each other. The antheræ are erect, and uſually of the length of the corolla. The germen of the piſtil is roundiſh; the ſtyle is very ſhort; the ſtigma is bifid, obtuſe, and very thick. The fruit is a ſmooth, globoſe berry, containing only one cell, in which there are four ſeeds, convex on one ſide, and angulated on the other.

1. *Liguſtrum folio anguſtiore.* *Narrow-leaved Privet.* Privet.

The root of the common Privet is large and ſtrong: it's trunk often an inch and an half in diameter, and it's height eight or nine feet. It is very ramoſe; it's branches fine and ſlender, and very tough: the older branches are covered with a greyiſh bark, the younger ones are green. The leaves ſtand two together, oppoſite to one another; they are oblong and narrow, of a deep green colour, and fleſhy ſtructure, ſmooth and gloſſy, and of an acrid, bitteriſh taſte, with ſome aſtringency. The flowers grow in cluſters, at the tops of the branches; they are white, ſmall, and very fragrant: the berries, which ſucceed theſe, are ſmall, and of a jet black.

This is the only European ſpecies of Liguſtrum. It is common wild with us, and in almoſt all other parts of Europe. It flowers almoſt all the ſummer. C. Bauhine calls it, Liguſtrum Germanicum; other authors, ſimply, Liguſtrum, or Liguſtrum vulgare. Our gardeners have a way of variegating it's leaves with yellow and with white. Tournefort has named this variegated plant as a ſpecies.

2. *Liguſtrum folio latiore.* *Broad-leaved Privet.*

This is a low, but very elegant, ſhrub. It uſually riſes with a ſingle ſtem, which is branched out into many others. The bark is of a duſky brown colour, very ſmooth, and ſcarce ever cracked at all. The branches are tough; the leaves are an inch broad, and more than an inch and an half long, broadeſt in the middle, and narroweſt at each end: they are of a fine ſhining green, and ſomewhat reſemble the leaves of the common bay-tree. The flowers are larger than thoſe of our Privet, and of a bright yellow colour: the berries are large and white.

This is a native of America. Plumier has deſcribed it under the name of Liguſtrum laurifolio, flore flaveſcente, baccis niveis.

Theſe are the only known ſpecies of Privet; and the latter of them is ſcarce ever ſeen with us.

PHYLLYREA.

THE calyx of the Phyllyrea is a ſmall perianthium, with four indentings at the edge, and is permanent. The corolla conſiſts of a ſingle petal: it has ſcarce any tube. It's limb is divided into four ſhort ſegments, of an oval figure, revolute and acute. The ſtamina are two very ſhort filaments, placed oppoſite to each other. The antheræ are ſimple and erect. The germen of the piſtil is roundiſh; the ſtyle is ſimple, and

and of the length of the ſtamina. The ſtigma is thick. The fruit is a globoſe berry, having but one cell, in which there is a ſingle, large, globoſe ſeed.

1. *Phyllyrea foliis lanceolatis ſubintegerrimis.* **Common Phyllyrea.**
The lanceolated-leaved Phyllyrea.

This ſpecies of Phyllyrea grows to ſix or ſeven feet high. It's wood is white and firm, it's bark greyiſh: it is very ramoſe. It's leaves ſtand together in pairs, one oppoſite to the other: they are oblong, narrow, and even at the edges, and of a bitteriſh, aſtringent taſte. The flowers grow in cluſters, at the baſes of the leaves; they are ſmall, and of a greeniſh-white colour: the berries, which ſucceed theſe, are round, and, when ripe, of a bluiſh-black; theſe ſtand on very ſhort peduncles, and cloſe to one another: they are of a mixed ſweet and bitter taſte, and in each is a ſingle, hard kernel.

This ſhrub is very common in our gardens, where it bears the open air, and needs no care or trouble to be taken about it; but it is not a native of England. It is wild in great abundance in Italy, Germany, Spain, and ſome parts of France.

This ſpecies varies extremely in it's general ſize, and in the largeneſs of it's leaves; hence Cluſius has made two ſpecies, if not three; his third and fourth Phyllyrea are evidently the ſame, and his fifth ſeems ſo too.

2. *Phyllyrea foliis cordato-ovatis.* **Prickly Phyllyrea.**
The Phyllyrea with cordated oval-leaves.

This is a more robuſt ſhrub than the former, though it ſcarce riſes to ſo much height as it. It's ſtem is an inch, or more, in diameter, the wood white, and the bark of a greyiſh colour. On the young branches the bark is green, ſpotted with white. The leaves are of a duſky green colour; they are an inch and an half long, near an inch broad in the wideſt part, of a thick conſiſtence, and ſomewhat prickly round the edges. The flowers are ſmall, and whitiſh, and ſtand in cluſters about the alæ of the leaves. The berries are ſmall, round, and black.

This ſpecies is a native of Portugal, and of ſome parts of Italy; and, though it's leaves are ſo extremely different in figure from thoſe of the other, yet, in all other reſpects, it is very like it. C. Bauhine calls the former ſpecies, Phyllyrea liguſtri folio, and this, Phyllyrea latifolia ſpinoſa; J. Bauhine calls the laſt, Phyllyrea foliis ilicis; both theſe authors, however, as well as Cluſius, and many others, have been miſled, by the variety both ſpecies ſometimes appear in, to deſcribe each of them under the name of ſeveral different ones. C. Bauhine calls one variety of the firſt, Phyllyrea anguſtifolia prima; and another, Phyllyrea anguſtifolia ſecunda; and a variety of the latter, Phyllyrea folio leviter ſerrato. Moſt of the botanical writers, ſince his time, have copied theſe errors from him.

The really diſtinct ſpecies of Phyllyrea, beſide theſe two, are, 1. The ſmall, broad-leaved Phyllyrea. 2. The box-leaved Phyllyrea. 3. The narrow-leaved, prickly Phyllyrea. 4. The narrow-leaved, deeply-indented Phyllyrea. 5. The nerium-leaved Phyllyrea. 6. The American Phyllyrea, with a yellow root, and pointed leaves. 7. The American Phyllyrea, with a red root, and roundiſh leaves.

The leaves and bark of Phyllyrea are ſaid to be aſtringent, and good in ulcers of the mouth, but they are not in uſe at this time.

O L E A.

THE calyx of the Olea is a ſmall, tubulated perianthium, conſiſting of one leaf. It has four indentings at the rim, and is erect and deciduous. The corolla conſiſts of a ſingle petal. It's tube is cylindric, and of the length of the cup; the limb is plain, divided into four parts, of a ſemioval figure. The ſtamina are two ſhort filaments, of a ſubulated figure, placed oppoſite to one another: the antheræ are erect. The germen of the piſtil is roundiſh. The ſtyle is ſingle, and very ſhort; the ſtigma bifid and thick, and it's ſegments are emarginated. The fruit is a drupe, of an oval figure, ſmooth, and containing only one cell, in which there is lodged a ſingle, rugoſe nut, of an ovato-oblong figure.

1. *Olea foliis oblongis, anguſtis, rigidis.*
The Olea, with oblong, narrow, rigid leaves. **The Olive.**

This is the common Olive-tree. It grows to be a large and tall tree, and ſpreads out it's branches every way. The bark is ſmooth, and of a greyiſh colour, the wood tolerably firm and ſolid. The leaves are of an oblong, narrow figure, and greyiſh colour: they, in ſome degree, reſemble thoſe of the common, long-leaved willows; they are even at the edges, of a thick ſtructure, and have no viſible veins, except only the middle rib. They are of a darker colour above, and a paler on the under ſurface; they ſtand on extremely ſhort pedicles, and frequently in pairs, oppoſite to one another. The flowers grow in cluſters, at the alæ of the leaves; they ſtand on ſhort pedicles: they are ſmall, and of a greeniſh white. Theſe, in many places, fall without producing any fruit, but, where the tree thrives well, they are ſucceeded by the common Olives.

The Olive-tree is not a native of England, but it is frequent in many parts of Europe, in moderate climates. It varies extremely in the ſize, ſhape, and colour of it's fruit, in conſequence of the culture; and Tournefort has recounted theſe varieties as ſo many diſtinct ſpecies. C. Bauhine, and moſt of the other writers, call this ſpecies Olea ſativa. The Oleaſter, or Olea Sylveſtris, deſcribed by many as a different ſpecies, is the ſame in a wild or uncultivated ſtate.

The really diſtinct ſpecies of the Olive are, 1. The African Olea, with box-like leaves, and a white, ſcabrous bark. 2. The African Olea, with a long and broad leaf, of a deep ſhining green above, and a paler green underneath. 3. The African Olea, with a long, narrow, pale-green leaf, and round, purple fruit. 4. The wild, Spaniſh Olive, with rigid leaves, hoary underneath, and an obtuſely-mucronated fruit.

We owe to the common Olea, firſt deſcribed, the pickled Olives eaten at our tables, and the oil we eat with ſallads, and uſe on ſo many, and ſo important, occaſions, both in medicine and mechanics.

CHIONANTHUS.

THE calyx of the Chionanthus is a perianthium, conſiſting of one leaf, divided into four ſegments at the edge, erect, acuminated, and permanent. The corolla conſiſts of a ſingle petal, and is divided into four parts. The tube is very ſhort, no longer than the cup, and is patulous. The limb is divided into four extremely long ſegments, which are erect, acute, of a linear figure, and ſomewhat uneven. The ſtamina are two extremely ſhort filaments, of a ſubulated figure, and are inſerted into the tube. The antheræ are cordated and erect. The germen of the piſtil is of an oval figure. The ſtyle is ſimple, and of the length of the cup. The ſtigma is obtuſe and trifid. The fruit is a round, unilocular berry, containing a ſingle, ſtriated officle. The ſtamina in this genus are often three, inſtead of two. The genus itſelf is allied to the nyctanthes, the ſyringa, the olea, liguſtrum, phyllyrea, and jaſmine, but, moſt of all, to the fraxinus corollifera. There is but one known ſpecies of it.

CHIONANTHUS.

The root is very ramoſe, and brachiated. The trunk is covered with a brown bark, cracked, and furrowed. The leaves are broad and roundiſh; the upper ſide of a deep green, the under ſide hoary and white. The flowers are white, and deeply laciniated. It is a native of Ceylon; but we have it in ſome of our gardens. Plukenet has figured it in his Almageſtum, T. 241. f. 4.

SYRINGA.

THE calyx of the Syringa is a ſmall, tubulated perianthium, conſiſting of a ſingle leaf, divided into four ſhort ſegments at the mouth, and erect. The corolla conſiſts of a ſingle petal; the tube is cylindric, and very long: the limb is divided into four ſegments, of a linear figure, hollow, and obtuſely-pointed. The ſtamina are two very ſhort filaments: the antheræ are ſmall, and hid within the tube of the flower. The germen of the piſtil is oblong; the ſtyle is capillary, and of the length of the ſtamina: the ſtigma is bifid and thick. The fruit is an oblong, compreſſed, acuminated capſule, formed of two valves, and containing two cells. The ſeeds are ſingle, oblong, and compreſſed, pointed at each end, and furniſhed with a membranaceous margin.

This genus comprehends the lilac of Tournefort.

1. *Syringa*

1. *Syringa foliis ovato-cordatis.*
The Syringa with ovato-cordated leaves. **Common Lilac.**

This is a large ſhrub. It riſes to eight or ten feet high, and ſends out a great number of branches. It's trunk is of two or three inches in diameter, and is covered with a bark, of a pale brown. The leaves grow two at a joint, and are large, oblong, and of an ovated figure, ſomewhat cordated at the baſe. They ſtand on moderately long pedicles, and are even at the edges, and of a pale colour, both on the upper and under ſides. The flowers are ſmall, but they grow in great cluſters, and are of a very ſweet ſmell: they are naturally bluiſh, but frequently of a pale roſe red, or quite white.

This ſpecies is common in our gardens: it is a native of Egypt and the Eaſt Indies, yet it perfectly well bears the cold of our climate. C. Bauhine calls it, Syringa cærulea; Tournefort, Lilac; Renealm, Calobotrichys. Tournefort very improperly makes the white-flowered one a diſtinct ſpecies, under the name of Lilac flore albo.

2. *Syringa foliis lanceolatis integris laciniatiſque.* **Perſian Lilac.**
The Syringa with undivided, lanceolated, and laciniated leaves.

This is a ſmall, but beautiful ſhrub. It grows to four or five feet high: it's wood is white, and the large branches have alſo a white pith in them. The bark is of a dark brown, or elſe reddiſh, and is uſually ſpotted with innumerable punctules, of a duſky yellow. The leaves, which grow on the lower part of the branches, are laciniated in ſuch a manner as to reſemble, in ſome degree, the leaves of the common jaſmine; thoſe higher up are ſingle, undivided, and of a lanceolated figure, and much reſemble thoſe of the common privet. The flower is ſmall, and uſually of a pale roſe colour, or fleſh colour, and of an extremely ſweet ſmell. It ſometimes flowers twice in a year, but the latter flowers, with us, are leſs beautiful and leſs fragrant than the former.

This ſpecies is a native of Perſia, but it is frequent in our gardens. It is very ſingular that, though the flower of this ſhrub is ſo perfectly ſimilar to that of the common Lilac, yet authors have referred it to very different genera. C. Bauhine calls it, Liguſtrum foliis laciniatis; Parkinſon, Jaſminum Perſicum. Cornutus calls it, Agem lilag Perſarum; and Gerard and J. Bauhine, Syringa cærulea.

3. *Syringa foliis lanceolatis integris.*
The Syringa, with undvided leaves.

This riſes to a ſhrub of ſix or ſeven feet high. It's bark is of a duſky brown colour, and very ſmooth: it's leaves are oblong and narrow, broadeſt at the middle, narrow at the baſe, and pointed at the extremity; they are of a duſky green colour on the upper ſide, and ſomewhat paler underneath. The flowers ſtand in cluſters, and greatly reſemble thoſe of the common Lilac; they are uſually of a pale red, ſometimes bluiſh. It greatly reſembles the former ſpecies, in all reſpects, but in wanting thoſe laciniated leaves which it has; poſſibly they may be but varieties one of another, though there requires further obſervation to determine that with certainty.

Theſe are all the known ſpecies of Syringa. The ſhrub, commonly called Syringa by our gardeners, is not of this claſs; it will be deſcribed hereafter in it's place, under the name of Philadelphus.

CIRCÆA.

THE calyx of the Circæa is a perianthium, compoſed of two leaves, of an ovated figure, concave, bent backward and deciduous. The corolla conſiſts of two petals; they are turbinated and cordated, equal in ſize, patent, and ſhorter than the leaves of the cup. The ſtamina are two capillary filaments; they ſtand erect, and are of the length of the cup: the antheræ are roundiſh. The germen of the piſtil is of a turbinated figure, and ſtands under the receptacle. The ſtyle is capillary, and of the length of the ſtamina; the ſtigma is obtuſe, and emarginated. The fruit is a turbinated, oval capſule; it is hairy, compoſed of two valves, and contains two cells: it opens from the baſe to the apex. The ſeeds are placed one in each cell, and are oblong, and narroweſt at the baſe.

Circæa.

Circæa.
Enchanter's Nightshade.

This is a very beautiful, as well as a very singular, plant. It rises to five, six, or ten inches, or more, high. It's root is oblong, white, and creeping, frequently jointed, and full of fibres. The stalk is round, of the thickness of a straw at the bottom, smaller all the way up, lightly hairy, and never much branched. It often rises single to the top; sometimes from about the middle of it's height it sends out a couple of branches, of two, three, or four inches long. The leaves stand in pairs, opposite to one another; they stand on pedicles of half an inch in length, and are broad, and of a sort of oval figure, but pointed, thin, of a pale green, and lightly indented at the edges. The upper part of the main stalk, and of the branches, runs up into a kind of spike, on which stand the flowers: they are very small, but very beautiful, and stand at distances, on short pedicles.

This elegant plant is common with us, and all over Europe, in woods, and among bushes. It flowers in April. C. Bauhine calls it, Solanifolia Circæa dicta major; Lobel, Circæa Lutetiana. There is, in reality, no other species of this genus, but authors have described the varieties of this under the names of distinct species. When it grows on starving ground, it has been called Circæa minima, and Solanifolia Circæa Alpina; and, in North America, where it grows very large, authors have called it, Circæa latifolia Canadensis flore albo.

DIANDRIA MONOGYNIA.

Division the Second.

Such as have regular corollæ, and the seeds contained in capsules.

VERONICA.

THE calyx of the Veronica is a perianthium, consisting of a single leaf, divided into four acute, lanceolated segments, and permanent. The corolla consists of a single petal; the tube is of the length of the cup, or nearly so: the limb is plain, and divided into four parts; the segments are oval, and the lower one is narrower than any of the rest; the segment overagainst it is broader than any. The stamina are filaments, smaller at the bottom than above, and bending upwards: the antheræ are two oblong. The germen is compressed; the style is capillary, of the length of the stamina, and declinate; the stigma is simple. The fruit is a capsule, of a turbinated, cordated figure, with a compressed apex; it is composed of two valves, and contains two cells, in each of which there are numerous, roundish seeds. The tube of the corolla is very different in the different species of this genus; in some it is extremely short, in others longer, and, in several species, the upper larger segment forms a kind of labium, or upper lip; and the other three form, together, a lower lip, but the lowest segment is always narrower than the others.

1. *Veronica floribus spicatis, foliis oppositis, caule procumbente.* **Common Speedwell.**

The common Veronica, with opposite leaves, spicated flowers, and procumbent stalks.

This is one of the most frequent species of Veronica, both with us and in most parts of Europe. It's stalks are long and procumbent; they lie upon the surface of the ground, and shoot out roots, as they run along; they are of the thickness of a packthread, and of a pale green colour, and lightly hairy; they are frequently jointed, and, at every joint, there grow two leaves; these are broad and short, somewhat hairy, and crenated round the edges, about half an inch in length, and a third of an inch in diameter, in dry places; in moist, often much larger. They are of a bitterish taste. The flowers stand in spikes, rising from the alæ of the leaves; they are small,

and

and of a bluiſh, or pale red colour. The ſtalks are ſometimes wholly procumbent, ſometimes the ends of them riſe up a little. This ſpecies is very common in meadows and paſtures, and on heaths. C. Bauhine calls it, Veronica mas ſupina & vulgatiſſima, a name borrowed by many others. J. Bauhine calls it, Veronica vulgatior folio rotundiore. Linnæus, in his Fl. L. Veronica caule repente, ſcapis ſpicatis, foliis oppoſitis, ovatis, ſtrigoſis.

2. *Veronica floribus ſpicatis, foliis ternis.*

The ternate-leaved, ſpiked-flowered Veronica.

This is a very ſpecious and beautiful plant. It grows to a foot and half, or more, in height; the ſtalk is round, of a pale green, and ſmooth, robuſt, and erect. The leaves ſtand uſually three at a joint, ſometimes more; they are ſomewhat like the leaves of the ptarmaca, two or three inches long, very narrow, and deeply ſerrated at the edges. They are ſmooth, and of a duſky green colour: the ſtalk is ſometimes quite ſingle, ſometimes it ſends out two or more branches; the tops are formed into long and beautiful ſpikes of flowers; they are of a beautiful blue colour, and ſtand very thick together, when they are fallen. The ſeed-veſſels appear, and are full of very ſmall, round ſeeds. The root is ſmall and not creeping, but it ſends up new ſhoots in great number, from the baſe of the old ſtalk.

This beautiful ſpecies is not a native of England, but is common in many other parts of Europe, in dry, hilly paſtures. Gerard and Parkinſon call it, Veronica cærulea, and Veronica ſpicata cærulea. C. Bauhine calls it, Lyſimachia ſpicata cærulea; and J. Bauhine, Veronica ſpicata, recta, profunde ſerrata, quam lyſimachiam cæruleam quidam vocant.

3. *Veronica floribus racemoſis lateralibus, foliis ovatis planis, caule repente.* **Brooklime.**

The lateral cluſter-flowered Veronica, with oval leaves, and creeping ſtalks.

The root of this ſpecies is compoſed of a number of white fibres. The ſtalk is round, ſmooth, thick, and ſucculent; it is ſometimes of a pale green, but more frequently of a reddiſh colour; it is procumbent in the lower part, and ſends out fibrous roots from the ſeveral joints into the mud. The upper part of the ſtalk riſes to ſix or eight inches high, and both this and the procumbent part have, at every joint, two leaves: theſe are of a deep green colour, ſmooth and ſucculent; they ſtand on moderately long pedicles, and are crenated about the edges; they are of an oval figure, and an inch and half, or more, in length. The flowers ſtand in ſpikes, on pedicles growing from the alæ of the leaves; they are of a beautiful blue colour: the capſules, which ſucceed them, are moderately large.

This ſpecies is common with us, and in all other parts of Europe, in ſhallow waters, and about the ſides of ditches and rivers. C. Bauhine calls it, Anagallis aquatica folio ſubrotundo; but he erroneouſly divides it into two ſpecies, a larger and a ſmaller, as it happens to grow in a better or worſe ſoil. Dodonæus calls it, Anagallis aquatica; and Tournefort, Veronica aquatica major folio ſubrotundo.

4. *Veronica floribus racemoſis lateralibus, foliis ovatis plicatis, dentatis.* **Wild germander.**

The lateral, cluſter-flowered Veronica, with oval, plicated, and dentated leaves.

The root of this ſpecies conſiſts of a number of ſlender fibres. The ſtalk is round, of a pale green colour, and a little hairy: it is in part procumbent, and ſhoots out in that part fibres into the earth from every joint; it riſes uſually to the height of ſix or eight inches. The leaves ſtand in pairs, and are affixed to the ſtalk without pedicles: they are hairy, and deeply dentated about the edges, three quarters of an inch long, and half an inch broad, and of a pale, greyiſh, green colour: from the alæ of theſe leaves there grow ſpikes of two or three inches long, on which ſtand a great number of very beautiful blue flowers; they are much larger than thoſe of the brooklime, otherwiſe like them.

This plant is very common in our paſtures in May, June, and July, and makes a very beautiful figure. C. Bauhine calls it, Chamœdrys ſpuria minor rotundifolia. J. Bauhine, Chamœdrys ſpuria latifolia ſive fœmina. Gerard and Parkinſon, Chamœdrys ſylveſtris.

Theſe are the moſt different from one another, in their manner of growth, of the ſpecies of Veronica, and ſerve therefore to ſhew it's principal variations in form; the reſt of the ſpecies are very numerous. The more ſingular are, 1. The bugle-leaved, ſpiked, Veronica of Wales. 2. The ſmall, erect, ſpiked Veronica. 3. The ſerpyllum-leaved Veronica; 3 The germander-leaved Veronica, with flowers on long pedicles. 4. The Veronica, with the flowers adhering to the ſtalks. 5. The upright Veronica, with divided leaves. 6. The ivy-leaved Veronica. 7. The long-leaved Veronica. 8. The narrow-leaved, ſcutellated Veronica. 9. The germander-leaved Veronica, with long pedicles to the leaves: Theſe are all natives of England. 10. The Pyrenæan, ſmooth-leaved Veronica. 11. The great, erect Veronica. 12. The broad-leaved, ſpiked Veronica. 13. The naked-ſtalked Veronica. 14. The clinopodium-leaved Veronica. 15. The hairy daiſy-leaved Veronica. 16. The Alpine, ſhrub Veronica. 17. The American, tall Veronica, with three, five, or ſeven leaves of a joint. 18. The ſhort-leaved, ever-green Veronica. 19. The laciniated-leaved Veronica. 20. The great, ſingle-ſtalked Veronica, 21. The Veronica, with the lower leaves round. 22. The teucrium-leaved Veronica. 23. The vervain-leaved Veronica. 24. The cymbalaria-leaved Veronica. 25. The moneywort-leaved Veronica. 26. The olive-leaved, water Veronica. 27. The nettle-leaved, ſpiked Veronica; and, 28. The hoary, obtuſe-leaved Veronica.

Several of the ſpecies of this genus are famous in medicine; the common ſpeedwell is a good antiſcorbutic, and has lately been celebrated in the gout and rheumatiſm. The water brooklime is alſo one of the antiſcorbutics of the ſhops, and it's juice is always made a part of the ſpring juices, given againſt thoſe complaints.

PÆDEROTA.

THE calyx of the Pæderota is a perianthium, conſiſting of a ſingle leaf, divided into five acute linear ſegments, and permanent. The corolla conſiſts of a ſingle petal. The tube is cylindric, and of the length of the cup; the limb is formed, as it were, into two labia: the upper lip is oblong, hollow, and narrow; the lower lip is broader, and is divided into three equal ſegments at the extremity. The ſtamina are two filaments, of the length of the corolla, and bend downwards; the antheræ are aſſurgent. The germen of the piſtil is roundiſh; the ſtyle is capillary, and of the length of the ſtamina; the ſtigma is truncated. The fruit is an oval capſule, compreſſed at the top and bifid, compoſed of four valves, and containing two cells, in each of which there are numerous oblong, obtuſe ſeeds, which adhere to a columnar receptacle. This genus is very nearly allied to the Veronica; but, though Linnæus ſeems deſirous of referring it to it, there ſeems more reaſon for the keeping them ſeparate.

Micheli has deſcribed this genus under the name of Bona rota.

1. *Pæderota foliis ovatis crenatis.*

The Pæderota, with oval, crenated leaves.

The root is fibrous and white; the ſtalks are round, ſlender, and ſcarce erect. The leaves ſtand in pairs, and are near an inch long, and little leſs in breadth; they are of a duſky green, and deeply ſerrated. The flowers are moderately large, and blue; they ſtand in ſhort, thick ſpikes. It is a native of Italy. Micheli calls it Bona rota montana Italica chamædryos folio rotundiore ſpica cærulea habitiore.

The other ſpecies are, 1. The narrower-leaved Pæderota; and 2. The yellow-flowered Pæderota.

JUSTICIA.

THE calyx of the Juſticia is a very ſmall perianthium, formed of a ſingle leaf, with five indentings at the top, acute, erect, and narrow: the corolla conſiſts of a ſingle petal. The tube is gibbous, the limb ringent. The upper lip is oblong and emarginated: the lower lip is of the ſame length with that, and is reflex, and obtuſely trifid. The ſtamina are two ſubulated filaments, they are hid under the upper lip of the flower; the antheræ are erect and bifid at the baſe. The fruit is an oblong, obtuſe capſule,

capſule, narrow at the baſe; compoſed of two valves, and containing two cells; (the partition placed contrariwiſe to the valves,) and opens by an elaſtic unguis: the ſeeds are roundiſh.

The upper lip of the corolla is various in it's ſituation. The unguis of each locule, by which the capſule is expanded, conſtitutes the eſſential character of the genus.

This genus comprehends the *Juſticia* of Houſton, the *Adhatoda* of Tournefort, and the *Echolium* of Rivinus.

1. *Juſticia arborea foliis lanceolato-ovatis, bracteis ovatis perſiſtentibus, corollarum galea concava.*

The arboreſcent Juſticia, with lanceolato-ovate leaves, with ovated bracteæ, and a hollow galea.

This is a beautiful ever-green ſhrub: it grows to four or five feet high. It's root is large, woody, divided into three or four branches, and furniſhed with a multitude of fibres, of a duſky browniſh colour, and ſtyptic taſte; the trunk grows to an inch and half, or more, in diameter. It's bark is of a pale brown, ſmooth, and gloſſy: it divides into a number of branches, which are thin and tough. The leaves are moderately large, and grow in pairs; they are of a pale green colour, and tender ſtructure; they are broad at the baſe, and terminate in a point. The flowers ſtand in ſpikes, with leaves intermixed, but it ſeldom produces them with us.

It is a native of Ceylon, but is to be met with in many of our ſtoves, where it thrives very well, but does not flower. Tournefort, Plukenet, and moſt other authors call it, Adhatoda Zeylanenſium. Linnæus, in the Hort. Cliffort, Juſticia foliis ovato-lanceolatis, ſpicis folioſis, florum galea concava.

2. *Juſticia herbacea, fructu parvo.*

The herbaceous Juſticia, with a very ſmall fruit.

This is an extreamly elegant plant. The root is oblong, white, and of the thickneſs of a ſtraw, or more: the ſtalk riſes to two feet in height, and is round, and of a pale green colour, jointed, and not quite ſtrait. The leaves ſtand in pairs, at an inch, or more, diſtance, oppoſite to one another; they are of a yellowiſh green colour, and of an irregularly oval figure, broadeſt near the baſe, and pointed at the extremity. The tops of the ſtalks and ſide branches have flowers in ſpikes on them; the fruit is very ſmall, and the ſeeds are heart-faſhioned.

This is a native of the Eaſt Indies, and is rarely met with in our ſtoves. The late Lord Petre had it: elſewhere I have not ſeen it. Tournefort calls it, Adhatoda herbacea, circeæ foliis, parvo fructu.

The other ſpecies of the Juſticia are, 1. The ſmall and white-flowered, mallow-leaved, Indian Juſticia. 2. The Juſticia, with a very narrow lip, bent backwards. 3. The ſmaller-leaved Juſticia; and, 4. The Juſticia, with ſhort pedicles to the leaves.

GRATIOLA.

THE calyx of the Gratiola is an erect perianthium, compoſed of a ſingle leaf, divided into five ſegments of a ſubulated figure, and permanent. The corolla is monopetalous and ringent: the tube is of an angular figure, and is longer than the cup. The limb is ſmall, and divided into four parts. The upper ſegment is broad, reflex, and emarginated: the others are ſtrait and equal. The ſtamina are five in number, but three of them are ſhort and ſteril; two only of power and efficacy, whence it properly belongs to this claſs. They are all of a ſubulated figure, and ſhorter than the corolla; the two which are perfect are affixed to the tube of the petal, and have each a round anthera on it. The germen of the piſtil is conic; the ſtyle is ſtrait and ſubulated, the ſtigma is bilabiated, but, after impregnation, the two lips fall together. The fruit is an oval, pointed capſule, compoſed of two valves, and containing two cells. The ſeeds are numerous and ſmall.

The eſſential characteriſtic of this genus is, that it has three caſtrated ſtamina. It has been confounded with the digitalis by many authors, but it differs in almoſt all the particulars from it.

There is but one known ſpecies of it.

Gratiola

Gratiola.
Hedge Hyſſop.

The root of this is oblong, of the thickneſs of a gooſe-quill, and creeps under the ſurface of the earth: it is white, and jointed, and ſends out a multitude of fibres from the ſeveral joints. The ſtalk is round, of a reddiſh colour at the bottom, and greeniſh toward the top; it grows to five, ſix, or eight inches high. The leaves ſtand in pairs oppoſite to one another, and at ſmall diſtances: they are oblong, broadeſt in the middle, and terminate in a point; they uſually are even at the edges, but ſometimes are lightly dentated. The flowers ſtand on ſhort branches, ariſing from the alæ of the leaves: they are ſingle, oblong, ſtriated, and are of a yellowiſh colour at the baſe, and white or reddiſh in all other parts of the ſurface, and a little yellowiſh within. The whole plant is remarkably bitter.

It is frequent in Germany, Italy, and France. C. Bauhine calls it, Gratiola centauroides. J. Bauhine ſimply, Gratiola; others, Gratia Dei centaurium paluſtre, and Polemonium paluſtre amarum.

It is a violent purge and vomit. People, in places where it is to be had, often take an infuſion of it in dropſies, jaundices, and many other chronic caſes. It is a rough medicine, but a powerful one.

PINGUICULA.

THE calyx of the Pinguicula is a ſmall, ringent, permanent perianthium. The upper lip of it is erect, and divided into three ſegments; the lower lip is reflex, and divided into two. The corolla is ringent, and conſiſts of a ſingle petal: the longer lip is ſtrait, obtuſe, trifid, and ſupine: the ſhorter lip is bifid, more obtuſe, and patent. The nectarium is of a corniculated figure, and is produced from the baſis of the petal. The ſtamina are two bifid filaments; one of the branches is cylindric and crooked, it turns upwards, is ſhorter than the cup, and has it's anthera; the other is ſhorter than this, and produces a glandule: the antheræ are roundiſh. The germen of the piſtil is globoſe: the ſtyle is very ſhort; the ſtigma is bilabiate; the upper lip of it is large, plane, and reflex, and covers the antheræ; the lower lip is very narrow, erect, bifid, and ſhorter. The fruit is an oval capſule, compreſſed at the top, and containing only one cell, in which there are ſeveral ſmall ſeeds, of a cylindric figure, and a looſe receptacle.

1. *Pinguicula nectario cylindraceo longitudine petali.*
The Pinguicula, with a cylindric nectarium of the length of the corolla.

Butter-wort.

This is the ſpecies of Pinguicula found with us, and called Yorkſhire Sanicle. The root of this ſpecies conſiſts of a tuft of fibres moderately thick, but not very long; from this root there riſe four, five, or more leaves: theſe lie flat on the ground, and are of a yellowiſh green colour, and are ſoft and unctuous on the ſurface, as if rubbed over with oil or butter. They are two inches long, about an inch broad, and obtuſe at the point: the edges are even; and the upper ſurface of the leaf, if nicely examined, is found to be covered with a fine ſilky down or hairineſs. From among theſe leaves riſe up two, or three, or more pedicles, ſometimes only one; theſe are three or four inches in height, and on the top of each ſtands a ſingle flower, of a purpliſh, bluiſh, or white colour, ſomewhat reſembling a violet in it's general form.

This ſpecies grows in boggy places in ſome parts of England, but it is not common with us; in Sweden, Germany, and Denmark, it is much more abundant. C. Bauhine and Tournefort call it, Pinguicula Geſneri, and many others borrow the ſame name; ſome call it ſimply Pinguicula, but that is erroneous, as there are other ſpecies of the ſame genus.

This ſpecies varies in the ſize and in the colour of the flower very conſiderably, in conſequence of the places it grows in. Linnæus Fl. Lap. mentions a variety of it with a purple flower, and the labia white. The large purple-flowered Pinguicula of Ray is a variety of this ſpecies. The length of the ſpur behind the flower varies alſo extreamly;

ly; and to this, as well as to the ſize and colour, are owing many of the ſuppoſed diſtinct ſpecies of the Engliſh botaniſts.

2. *Pinguicula nectario conico petalo breviore.*

The Pinguicula, with a conic nectarium, ſhorter than the corolla.

The root of this ſpecies is compoſed of two or three ſmall fibres, each of which divides into three or four ramifications; from this root there riſe three, four, or five leaves, ſometimes more: they are fatty on the ſurface, and of a pale green colour, narroweſt at the baſe, broadeſt near the other extremity, and terminate in an obtuſe point. The ſtalk uſually riſes ſingle in the midſt of theſe leaves; it is two or three inches high, and ſupports a ſingle flower, ſomewhat of the external ſhape of a violet, of a white colour, with an elegant yellow ſpot in the palate of the corolla, where there is a grey one in the common kind. The great diſtinction, however, is in the nectarium, which in this ſpecies is ſhort and conic. Ray ſeems to mean this by that he calls, Pinguicula flore albo minore calcari breviſſimo. The Bauhines ſeem alſo to have known it as diſtinct from the former, though they did not well underſtand what the diſtinction was. We have it on the bogs in Weſtmoreland, but very ſcarce; it is more frequent in Sweden, Norway, and ſome parts of Germany.

3. *Pinguicula ſcapo villoſo.*

The hairy-ſtalked Pinguicula.

This is the ſmalleſt of all the Pinguicula kind. It's root is compoſed of three or four fibres, which divide each into a few ramifications: from this there riſe three or four leaves, about three quarters of an inch in length, half an inch in breadth, and very obtuſe at the ends; they are of a pale green colour, and fatty ſurface. In the midſt of theſe riſes a ſingle ſtalk, ſometimes two, or more, on the top of which ſtands a ſingle flower, ſmaller than in either of the former ſpecies, and of a pale blue, or pale red colour. The ſtalks are covered with a fine ſoft hairineſs, which is the eſſential character of the ſpecies.

This is found in Cornwal, and in ſome other parts of England; in Lapland alſo, and in ſome parts of Germany, it has been lately diſcovered. Ray calls it, Pinguicula flore minore carneo. Rudbeck, Pinguicula Lapponum vel Alpina minima flore purpureo, liis ad radicem ternis rotundis.

UTRICULARIA.

THE calyx of the Utricularia is a very ſmall perianthium, compoſed of two oval, concave, deciduous leaves. The flower is of the ringent kind: it conſiſts of a ſingle petal. The upper lip is plane, obtuſe, and erect; the lower lip is large, plane, and entire: the palate of the flower is cordated, and appears prominent between the lips: the nectarium is corniculated, and ariſes from the baſe of the petal. The ſtamina are two very ſhort and crooked filaments; the antheræ are ſmall and coherent. The germen of the piſtil is globoſe, the ſtyle is capillary, and of the length of the cup; and the ſtigma is conic. The fruit is a large, globoſe capſule, having only one cell, and in it a number of ſmall ſeeds.

This genus takes in the lentibularia of Rivinus, Vaillant, and Dillenius.

1. *Utricularia nectario conico longiore.*

The Utricularia, with a longer, conic nectarium.

The root of this ſpecies is thin, whitiſh, and creeping; from this ariſe a multitude of branches, which divide into many others, and are furniſhed with finely divided or divaricated leaves: theſe branches, with their leaves, lie flat upon the mud, and ſend out fibrous roots at ſeveral diſtances, by which they are faſtened down to it. At the ſame parts of theſe branches, from whence the roots grow, there are alſo affixed a very ſingular kind of round hollow bodies; they are a kind of pellucid veſicles, or Utriculi, and have only one aperture. Theſe are very numerous on the branches: the genus has it's name from them, but it is not eaſy to aſcertain their uſe. From theſe branches,

in ſeveral parts, there ariſe naked ſtalks of ſix or eight inches high: theſe are ſimple, of the thickneſs of a packthread at the baſe, and on their upper part they bear ſix or eight flowers moderately large, of a beautiful yellow colour.

This ſpecies is not uncommon with us in ſtanding waters, and it is yet more frequent in Germany. Rivinus calls it, ſimply, Lentibularia. Vaillant, Lentibularia major. C. Bauhine, Millefolium aquaticum lenticulatum. J. Bauhine, Millefolium aquaticum flore luteo galericulato. Rudbeck calls it, Filipendula aquatica ſive millefolia lenticulata.

There is only one more ſpecies of this genus, which is the leſſer Utricularia, with a ſhorter conic nectarium; this floats on the water in ſome of our rivers and ponds.

DIANDRIA MONOGYNIA.

Diviſion the Third.

Such as have irregular corollæ, and naked ſeeds.

VERBENA.

THE calyx of the Verbena is a tubulated, angular, linear perianthium, compoſed of a ſingle leaf, marked with five indentings at the verge, and the fifth denticle truncated. This cup is permanent. The corolla conſiſts of a ſingle petal: the tube is cylindric, ſtrait, and of the length of the cup. The extremity of it is dilated and incurvate: the limb is patent, and lightly divided into five ſemiorbicular and equal ſegments. The filaments are four in number, but uſually two of them want antheræ, and ſerve to no purpoſe in generation. The filaments are all ſhort, and buried within the tube; the two naked ones ſhorter than the reſt. The germen of the piſtil is ſquare, the ſtyle is ſimple, capillary, and of the length of the tube: the ſtigma is obtuſe: the ſeeds are either two or four in number, after every flower; and they lie naked, or with a very thin and ſcarce diſtinguiſhable covering in the calyx.

This genus comprehends the Verbena of Tournefort and others; the Sherardia of Vaillant; the Blairia of Houſton; the Kempfera of Houſton, and the Valerianelloides of Boerhaave.

In the Sherardia, the antheræ are only two, and the ſeeds in like manner two: in the Blaira, the antheræ are two, the ſeeds echinated, and the calyx inflated: in the Verbena of authors, the antheræ are four in number, and the ſeeds obtuſe: in the Kempfera, the ſtamina are two, and the calyx has four acute ſetæ.

1. *Verbena foliis multifido-laciniatis, ſpicis filiformibus.* **Common Vervain.**
The Vervain, with multifid, laciniated leaves, and filiform ſpikes.

The root of this ſpecies is oblong, white, of the thickneſs of a large packthread, and of a bitter taſte: the plant riſes to two feet in height; the ſtalk is ſquare, and very rigid and firm, a little hairy, and ſomewhat branched. The leaves ſtand in pairs, at ſmall diſtances on the ſtalk; they are a little hairy, and of a duſky green colour: they are oblong, and very deeply ſinuated, ſomewhat in the manner of oak-leaves; the two loweſt ſinus's are always larger, and deeper than any of the others. In the alæ of the leaves, and at the top ſtalks, ſtand very long and thin ſpikes of flowers. The colour of the flowers is a pale blue, and they are very ſmall.

This ſpecies is common with us in dry and barren places. C. Bauhine calls it, Verbena communis cæruleo flore. J. Bauhine, Verbena vulgaris; and Dodonæus, Verbena recta.

2. *Verbena tetrandra ſpicis filiformibus, foliis multifido-laciniatis, caulibus numeroſis.*
The thin-ſpiked Vervain, with multifid, laciniated leaves, and numerous ſtalks.

This is a very robuſt plant: it grows to four feet high; it's root is white, thick, and oblong; it's ſtalks are ſquare, rigid, and ſomewhat hairy: four or more of theſe ariſe from the ſame root, and, each of them dividing into many branches, the whole plant has a very buſhy appearance. The leaves ſtand in pairs, oppoſite to one another, at ſmall diſtances; they have moderately long pedicles; they are two inches and a half in length, and an inch and half in breadth in the broadeſt part: they are of a duſky green colour, largeſt near the baſe, and terminate in a point; they are of a rigid ſtructure, and very deeply laciniated. The flowers are much larger than thoſe of the former ſpecies, and of a pale blue; they ſtand in long, thin ſpikes. This ſpecies is a native of Spain and Portugal. It is to be met with in ſome of our gardens. Haller calls it, Verbena urticæ folio Canadenſis, foliis inciſis, flore majore.

The other principal ſpecies of Vervain are, 1. The ſhort-ſpiked, nettle-leaved, American Vervain. 2. The narrower-leaved, American, nettle-like Vervain, with ſhort ſpikes, and purple flowers. 3. The white-flowered, narrower, nettle-leaved, American Vervain, with long ſpikes. 4. The broad-leaved, tall, Portugal Vervain. 5. The fine-leaved Vervain. 6. The ſmall, green-leaved Vervain, flowering at the joints. 7. The American Vervain, with numerous ſpikes, and very narrow, nettle-like leaves. 8. The lanceolate, amplexicaule leaved Vervain, with faſciated ſpikes. 9. The long and thin-ſpiked Vervain, with haſtated leaves. 10. The thin-ſpiked Vervain, with undivided, ſerrated leaves. Of all theſe ſpecies, not one, except the firſt, is a native of England.

Vervain is a cephalic and carminative; it is good in head-achs, nervous complaints of all kinds, and in obſtructions of the viſcera. It is greatly recommended alſo by ſome in diſeaſes of the breaſt and lungs.

LYCOPUS.

THE calyx of the Lycopus is a tubulated perianthium, compoſed of one leaf, and lightly divided at the end into five narrow and pointed ſegments. The corolla conſiſts of a ſingle petal: the tube is cylindric, and of the length of the cup: the limb is divided into four parts, obtuſe and patulous; the ſegments are nearly equal in length; the upper one is broad and emarginated, the lower one ſmaller. The ſtamina are two filaments, longer than the corolla, and inclined towards it's upper ſegment. The antheræ are ſmall: the germen of the piſtil is quadrifid: the ſtyle is capillary, ſtrait, and of the length of the ſtamina: the ſtigma is bifid and reflex. There is no fruit, but the ſeeds are four after every flower, and are lodged in the cup.

This genus comprehends the Lycopus of Tournefort, and the Pſeudomarrubium of Rivinus.

1. *Lycopus foliis indiviſis.* Water Hoarbound.
Lycopus, with undivided leaves.

The root of this ſpecies is long, ſlender, and creeps under the ſurface of the ground. It ſends down fibres in great abundance, and from the ſeveral parts of it there riſe a great number of ſtalks. Theſe ſtand ſingly: they grow to be three feet high, and are ſquare, green, hairy, and hollow: they uſually ſend off ſome, but not many, branches. The leaves ſtand in pairs, on the ſtalk, at ſmall diſtances: they are oblong, of a pale green colour, very rugoſe, and deeply ſerrated about the edges; they terminate in a point. They have no pedicles, and the lower ones are uſually ſomewhat divided, eſpecially toward the baſe; the reſt are only ſerrated. The flowers grow in cluſters round the ſtalks; at the inſertions of the leaves, they are ſmall, white, and remain but a little time on the plant. The cup remains long, and contains the ſeeds.

This

This ſpecies is extreamly common with us in meadows, and by ditch-ſides. Tournefort calls it, Lycopus paluſtris glaber. Rivinus, Pſeudomarrubium vulgare paluſtre; and C. Bauhine, Marrubium paluſtre glabrum.

This herb was once uſed for dying black; linnen and cloaths were dyed by means of it.

2. *Lycopus foliis laciniatis hirſutis.*
The hairy, laciniated-leaved Lycopus.

The root of this ſpecies is compoſed of ſeveral long and jointed flagellæ, which creep upon, or juſt under, the ſurface of the ground. The ſtalks are ſquare, and more hairy than thoſe of the former; they grow to about eighteen inches high. The leaves ſtand in pairs at the diſtance of an inch, or more; they have no pedicles, but are affixed immediately to the ſtalk. They are about an inch and half long, and three quarters of an inch in diameter: they are hairy, and of a pale green colour, and are laciniated or divided into ſegments, down to the middle rib. The ſegments are ſharp-pointed, and crenated at the edges. The flowers are ſmall and white; they ſtand in cluſters round the ſtalk, at the baſe of the leaves.

This ſpecies is not a native of England, but it is common in many parts of France. C. Bauhine calls it, Marrubium paluſtre, hirſutum, tenuius laciniatum; and Tournefort, Lycopus foliis in tenues lacinias diſſectis.

The other ſpecies of the Lycopus are, 1. The hairy Lycopus, with undivided leaves. 2. The ſmooth, Canada, laciniated Lycopus.

ZIZIPHORA. Amethyſtea.

THE calyx of the Ziziphora is a very long, cylindric, and tubular perianthium; it is compoſed of one leaf, and is hairy, ſtriated, and divided at the end into five very ſmall ſegments, and is bearded. The corolla is ringent, and compoſed of a ſingle petal; the tube is cylindric, and of the length of the cup; the limb is very ſmooth; the upper lip is ovated, erect, emarginated, and obtuſe: the lower lip is broad and patent, and is divided into three rounded, equal ſegments. The ſtamina are two ſimple patent filaments, of the length of the corolla; the ſtigma is acuminated and inflex. There is no fruit, but the cup contains four ſeeds, which are oblong and obtuſe, gibbous on one ſide, and angular on the other.

1. *Ziziphora foliis lanceolatis, floribus lateralibus.*
The Ziziphora, with lanceolated leaves, and lateral flowers.

The root of this ſpecies is compoſed of a number of moderately thick, white fibres; from this riſe three or four ſtalks. The plant grows to ſix, eight, or ten inches in height. It's ſtalk is rigid and firm, it's leaves of two different ſhapes; thoſe near the root, and on the lower part of the plant, are ſhort, obtuſe, and of a roundiſh figure; the others are narrow and oblong narroweſt at the baſe, broadeſt in the middle, and terminate in a point: they are ſmooth and even at the edges, and of a duſky green colour. The flowers ſtand in the alæ of the leaves, in little cluſters; they are ſmall, and of a pale red.

This ſpecies is a native of Syria, but it ſucceeds very well in our gardens, where it bears the open air; it is an annual, but riſes very eaſily from ſeed.

DIANTHERA.

THE calyx of the Dianthera is a perianthium, divided into five parts. The ſegments are equal, and of a lineari-lanceolated figure, and equal in ſize; the whole cup is of the length of the corolla, and is permanent. The corolla is compoſed of a ſingle petal, and is of the ringent kind. The tube is patulous, and of the length of the limb. The upper lip is of an ovated figure; the lower lip is divided into three oblong and equal ſegments. The ſtamina are two filaments, affixed to the back of the corolla, and of the length of the upper lip; the antheræ are double on each filament;

lament, they are of a kidney-like ſhape, and one of them is ſomewhat higher than the other. The germen of the piſtil is of an oval figure; the ſtyle is of the length of the ſtamina: the ſtamen is ſlender and bifid, and it's lower ſegment is bent backward.

This genus differs from ſage in it's cup, being divided into five parts; from all the other genera of this claſs, by the double antheræ.

Of this genus there is only one known ſpecies.

DIANTHERA.

The root is compoſed of a great number of thick fibres: the ſtalk is tender, of a duſky green, and erect. The leaves ſtand in pairs, and are of a lanceolated figure; they are ſmooth, even at the edges, and of a deep green, and have no pedicles. The flowers ſtand on peduncles ariſing out of the alæ of the leaves; they are diſpoſed in a kind of ſpike, and do not grow two at a joint, but alternately.

It is a native of Virginia; it was firſt diſcovered by Mr Clayton, and is deſcribed by Gronovius, in his Flora Virginica.

SALVIA.

THE calyx of the Salvia is a tubulated, ſtriated perianthium, compoſed of one leaf, compreſſed, gradually widening toward it's top, and at the verge erect and bilabiated; the upper lip is terminated by three points, the under one by two. The corolla conſiſts of a ſingle petal; the tube toward the upper part is large and compreſſed, the limb is ringent; the upper lip is hollow, compreſſed, crooked, and emarginated; the lower lip is broad, and divided into three ſegments, of which the middle one is large, roundiſh, and emarginated. The ſtamina are two filaments bifid from the middle, their branches ſeparated by an obtuſe ſinus; one of the branches of each filament is longer than the other, and is hid under the upper lip of the flower, and on this branch ſtands the anthera; on the other branch only an obtuſe head. The germen of the piſtil is quadrifid; the ſtyle is long and capillary, and ſituated as the ſtamina. The ſtigma is bifid; there is no fruit: the ſeeds are lodged in the cup, which cloſes a little at the top, to keep them in; they are four in number after every flower.

This genus comprehends the Salvia, the Horminum, and the Sclarea of Tournefort, and other authors. The ſingular bifurcation of the ſtamina conſtitutes the eſſential character of it. There are found in many of the ſpecies the rudiments of two ſteril ſtamina, in the mouth of the corolla, under the upper lip. The obtuſe head, which terminates the ſhorter branch of the filaments, in ſome is callous, and reſembles a glandule; in others it has the appearance of the rudiment of an anthera, and has ſome farina.

1. *Salvia foliis lanceolato-ovatis, integris, crenulatis, floribus ſpicatis, calycibus acutis.* **Red Sage.**

The lanceolato-ovate-leaved Sage, with ſpiked flowers, and acute cups.

The root of this ſpecies is hard, oblong, and woody, variouſly branched, and of a brown colour; from this riſe ſeveral ſtalks, woody, hard, branched, and variouſly contorted and bent: the younger branches are ſquare, hairy, and of a greeniſh or reddiſh colour. There ariſe a great number of leaves immediately from the root, and others ſtand on the ſtalks in pairs, oppoſite to one another: they ſtand on long pedicles, and are very rugoſe, and a little hairy. They are of an oblong figure, obtuſely pointed at the end, and crenated round the edges, and are ſometimes of a pale green, but more uſually of a reddiſh colour. The flowers ſtand in a kind of ſpikes at the tops of the ſtalks; they are large, and of a beautiful blue colour, with more or leſs reddiſhneſs in it.

This ſpecies is a native of Italy, and of ſome parts of France. It is cultivated in almoſt all our gardens, and is perennial and ſufficiently hardy.

2. *Salvia foliis rugoſis oblongo-cordatis, floralibus calyce longioribus.* **Clary.**

The rugoſe and oblong cordated-leaved Sage, with the floral leaves longer than the calyx.

The root of this ſpecies is oblong, ſingle, woody, of a brown colour, and covered

with fibres. It's taſte is hot, and ſomewhat aromatic. The ſtalk is ſquare, and of a third of an inch in diameter; it grows to three or four feet high; it is lightly hairy and jointed, and it ſends out branches in pairs, croſs-wiſe one to another. The leaves are placed in pairs oppoſite to one another. They are of a greyiſh colour, very rugoſe and hoary; they ſtand on long pedicles, and are ſeven or eight inches long, and four or five over in the broadeſt part. They are largeſt at the baſe, ſomewhat cordated, and dentated about the edges. The leaves toward the upper part of the ſtalks are ſmaller, but of the ſame ſhape. The flowers grow on the tops of the main ſtalks and branches in very long ſpikes. They are very large, of a pale bluiſh-grey colour, and ſtand in circles round the ſtalks. The whole plant has a very ſtrong and diſagreeable ſmell, and a bitter taſte. It is a native of Syria, but it thrives very well in the open air in our gardens. C. Bauhine calls it, Hominum ſclarea dictum. J. Bauhine, Gallitrichum ſativum; others, Horminum vulgare.

3. *Salvia foliis ſimplicibus dentato-pinnatis, rugoſis, verrucoſis.*
The ſimple, dentato-pinnated-leaved Sage.

The root of this ſpecies is oblong, and of a whitiſh colour: the ſtalk is ſquare, not ſolid, but containing a ſpungy pith. It is hoary on the ſurface, and whitiſh. The leaves ſtand in pairs: they are oblong, and very deeply laciniated, ſo as to give ſome reſemblance of a ſtag's horn. They are very rugoſe, and riſe up in ſeveral places into a kind of protuberances. They are covered with a white, hoary matter, and are of a ſtrong ſmell. The flowers grow in long ſeries, on the tops of the main ſtalk and branches; they are of a middle ſize, between thoſe of common Sage, and the common clary, and are of a pale yellowiſh colour.

This ſpecies is a native of Perſia, but it thrives very well with us in the open air, and is in many of the botanical gardens. This is one of the ſclareæ of Tournefort; he calls it, Sclarea rugoſo verrucoſoque folio laciniato. Moriſon calls it, Horminum ceratophyllum, rugoſum, flore ſulphureo; and Plukenet, Horminum folio rugoſo cornu cervi exprimente.

4. *Salvia foliis oblongis, ovatis, obtuſis, æqualiter crenatis, corollæ galea ſemi-orbiculata.*
The oval, oblong-leaved Sage, with a ſemi-orbicular galea of the flower.

The root of this ſpecies is oblong and ſlender: the ſtalks ſquare, green, and a little hairy; the leaves of an oval, oblong figure, and crenated round the edges: the lower ones have long pedicles, the upper ones are ſeſſile; the floral leaves are of a cordated figure. The flowers ſtand about, three on a ſide, in the alæ of the leaves. The galea is rounded, and not emarginated; the lower lip is entire and emarginated, and the lateral denticles are prominent. The piſtil is crooked, and ſcarce appears.

This is a native of Syria, but it bears the cold of our climate very well. Tournefort calls it, Horminum coma viridi.

The other principal ſpecies of this large genus are of the Sage-kind: 1. The broad-leaved, ſerrated Sage. 2. The arboreſcent Sage, with divided leaves. 3. The great Cretic Sage. 4. The large, broad, and roundiſh-leaved Sage. 5. The ſmaller auriculated Sage. 6. The narrow-leaved, ſerrated Sage. 7. The broad-leaved, wormwood Sage, with red flowers. 8. The broad-leaved, hairy, and viſcous Oriental Sage, with purple flowers. 9. The African, ſhrubby Sage, with ſcorodonia leaves, and violet-coloured flowers. 10. The ſhrubby African Sage, with roundiſh blue-green leaves, and large yellow flowers. 11. The undated-leaved pomiferous Sage. 12. The lavender-leaved Spaniſh Sage. 13. The white-flowered, wormwoood Sage.

Of the Horminum kind are, 1. The wild Clary. 2. The meadow Clary, with a very ſmall flower. 3. The betony-leaved, blue-flowered, ſpring Clary. 4. The hairy, ovated-leaved Clary. 5. The vervain-leaved Clary. 6. The oak-leaved Clary. 7. The little-branched Egyptian Clary. 8. The little betony-leaved procumbent Clary.

Of the Sclarea kind are, 1. The great lanuginous Clary, called Æthiopic by the old authors. 2. The jagged-leaved, very hoary Sclarea. 3. The aſphodel-rooted Clary. 4. The glutinous Pyrenæan Clary, with ſinuated leaves. 5. The ſtinking, hairy, white-flowered Clary. 6. The great blue-flowered Clary. 7. The ſerrated-leaved, meadow Clary. 8. The ovated-leaved, great Clary. 9. The triangular, dentated-leaved

leaved Clary. 10. The hairy-ſtalked, triangular-leaved Clary. 11. The helianthemum-leaved African Clary. 12. The dwarf laciniated Clary, with large flowers.

The virtues of the plants of this genus are very conſiderable. The common Sage is a ſudorific and detergent. The Clary is famous in hyſteric and hypochondriac complaints, and is alſo eſteemed a cordial, and a provocative to venery.

ROSMARINUS.

THE calyx of the Roſmarinus is a tubulated perianthium formed of one leaf, compreſſed at the top, and bilabiate; the upper lip entire, and the lower bifid. The corolla conſiſts of a ſingle petal: the tube is longer than the cup; the limb is ringent. The upper lip is erect, ſhort, divided into two ſegments, and has it's edges turned back: the lower lip is reflex, and divided into three ſegments, of which the middle one is much the largeſt, and is hollow, and narrow at the baſe. The lateral ſegments are narrow and acute. The ſtamina are two ſubulated filaments, turned toward the upper lip, and longer than it. The antheræ are ſimple: the germen of the piſtil is quadrifid; the ſtyle in figure and ſituation reſembles the ſtamina; the ſtigma is ſimple and acute. Every flower is ſucceeded by four oval ſeeds, which are lodged in the cup. This genus is very nearly allied to the ſalvia. There is but one ſpecies of it,

Roſmarinus. Roſemary.

This is a low, but conſiderably robuſt, ſhrub: the root is long, variouſly divaricated, woody, and furniſhed with a number of fibres. The ſtem is hard and firm, and covered with a brown bark, which is full of cracks and wrinkles. The younger ſhoots are round, green or whitiſh, and tender: the leaves are oblong and narrow, of a very dark green on the upper ſide, and whitiſh underneath. They ſtand thick on the ſtalks, and are firm, rigid, and of a very pleaſant ſmell: the flowers are of a greyiſh white. Roſemary is a native of Spain and Greece: it thrives tolerably well in our gardens in the open air.

It is a very conſiderable plant in medicine. It enters many of the compoſitions, as a cephalic and nervine; and the Hungary water of the perfumers is made of it. The upper parts of the branches, when loaded with flowers, are diſtilled in ſpirit of wine for this purpoſe.

MONARDA.

THE calyx of the Monarda is a tubulated, cylindric, ſtriated perianthium, conſiſting of a ſingle leaf, divided into five ſhort and equal ſegments at the rim. The corolla conſiſts of a ſingle petal: the tube is cylindric, and longer than the cup; the limb is ringent. The upper lip is ſtrait, narrow, and undivided: the lower lip is broad, reflex, and divided into three ſegments: the middle ſegment is oblong, narrow, and emarginated; the lateral ones are ſhorter and obtuſe. The ſtamina are two ſetaceous filaments, of the length of the upper lip of the corolla, in which they are incloſed and ſurrounded. The antheræ are compreſſed, truncated above, and convex below, and erect. The germen of the piſtil is quadrifid; the ſtyle is capillary, and involved in the upper lip along with the ſtamina; the ſtigma is bifid and acute; after every flower there grow four ſeeds of a roundiſh figure; theſe are lodged naked in the cup.

This genus includes the Origanum ſpurium of Rivinus.

1. *Monarda capitulis terminalibus caule obtuſe angulato.*
The obtuſely angular-ſtalked Monarda, with terminatory heads.

The root of this ſpecies is compoſed of a great number of fibres: the ſtalks are uſually obtuſely quadrangular; they riſe to a foot and half in height, and are hairy and branched. The leaves are oblong and narrow, and of a pale green colour; they much reſemble thoſe of the common Lyſimachia ſiliquoſa of authors. They grow irregularly, but very thick and cloſe upon the ſtalk: at the top of the main ſtalk and of the branches there ſtand cluſters of ſmaller ones, ten or twelve in a cluſter, diſpoſed orbicularly; theſe ſurround a cluſter of the flowers, which are formed into a rounded but flat head, compoſed of a multitude of long tubular flowers, like little pipes, of a purple or red colour. From this tuft of leaves, and head of the flower, there not unfrequently riſes another, ſupported on a ſhort ſtalk; in this caſe the

the plant is ſaid to be proliferous. The whole plant is covered with a hoary lanugo, and ſmells fragrant and aromatic. It's taſte is very pungent and acrid, burning the mouth, on taking the leaſt piece of it into it: the root is quite inſipid.

This ſpecies is perennial; it flowers in Auguſt. It is a native of Canada, and ſome other parts of North America. It is preſerved in the green-houſes of our curious people, and flowers there regularly. Cornutus, to whom we owe the knowledge of it, calls it, Origanum fiſtuloſum Canadenſe. Moriſon calls it, Clinopodium Canadenſe majus, hirſutum, floribus fiſtuloſis. Linnæus, in his H. Cliffert. Monarda floribus capitatis caule obtuſo.

2. *Monarda floribus verticillatis corollis punctatis.*
The verticillate Monarda, with punctated flowers.

The root of this ſpecies is compoſed of a number of white fibres, inſipid to the taſte. The plant riſes to eight or ten inches high: the ſtalk is ſquare, and the leaves oblong, narrow, and of an extreamly fragrant ſmell. The flowers ſtand in cluſters, in a verticillate manner, ſurrounding the ſtalks: there grow under every cluſter of them ten or twelve reddiſh leaves: the flowers themſelves are large, and of a beautiful yellow colour, and are variegated with purple ſpots. This ſpecies is a native of Virginia, but it is not eaſy to make it ſtand more than the firſt year in our gardens, though naturally a perennial plant.

The Monardæ have improperly been ranked among the clinopodia and ocyma by moſt authors.

COLLINSONIA.

THE calyx of the Collinſonia is a ſmall perianthium, compoſed of a ſingle leaf, divided into five ſhort and equal denticles at the extremity: the three upper ones are convex and inflex, and the two lower ones patent and ſubulated. The whole cup is permanent: the corolla is monopetalous and unequal: the tube is of a conico-cylindraceous ſhape, and is much larger than the cup: the limb is quadrifid and erect: one of the ſegments is very long, and is divided to the middle into other ſmaller, ramoſe, and capillary laciniæ. The ſegment, oppoſite to this, is very ſmall, emarginated, and acute: the lateral or alternate ones are oppoſite to one another, and are erect, entire, and very ſmall. The ſtamina are two erect and very long ſetaceous filaments: the antheræ are ſimple: the germen of the piſtil is globoſe; the ſtyle is ſetaceous, of the length of the ſtamina, and inclines to one ſide; the ſtigma is bifid and acute. The ſeed is ſingle, and of a globular figure, and is contained in the bottom of the cup.

Of this genus there is but one known ſpecies.

COLLINSONIA.

The root is compoſed of a multitude of white and thick fibres. The ſtalk is ſquare, and grows to three or four feet high. The leaves ſtand on pedicles, and are large, and of an obſcure green, broadeſt near the baſe, and terminate in a point; they are deeply ſerrated round the edges. The flowers are numerous, and moderately large; they are of a pale red. It is a native of North America, but is now frequent in our gardens. None of the old authors were acquainted with it.

MORINA.

THE calyx of the Morina is double: the perianthium of the fruit is of a cylindric figure, tubulous and permanent; it is compoſed of a ſingle leaf, dentated at the verge: two of the oppoſite denticuli are longer than the reſt, and all of them are ſubulated and acute. The perianthium of the flower is bifid, tubulous, and compoſed alſo of one leaf: the ſegments are emarginated, obtuſe, erect and permanent, and are of the ſize of the others.

The corolla conſiſts of a ſingle petal: the tube is extreamly long, large at the top, and ſomewhat crooked; at the baſe it is thin and capillary. The limb is plain, obtuſe,

tuſe, and bilabiate: the upper lip is ſmall and ſemibifid; the lower lip is divided into three obtuſe ſegments, the middle one of which is longer than the others. The ſtamina are two ſetaceous filaments, ſhorter than the limb; they ſtand parallel, and preſs the ſtyle. The antheræ are erect and approximate, and of a cordated figure: the germen of the piſtil is globoſe, and is placed under the receptacle of the flower: the ſtyle is capillary, and longer than the ſtamina; the ſtigma is peltated, capitated, and inflex. After the flower there appears a ſingle naked ſeed, which is coronated with the cup of the flower, and ſtands in the other cup.

This genus comprehends the Morina of Tournefort, and the Diototheca of Vaillant. Of this there is but one known ſpecies.

MORINA.

The root is oblong, ſlender, white, and furniſhed with a few fibres: the radical leaves are eight inches long, moderately broad, divided at the edges, and of a duſky green. The ſtalks are erect and robuſt; the leaves ſtand uſually two at a joint; ſometimes, though leſs frequently, there are four together: the flowers ſtand on the tops of the branches in cluſters, or heads, and are ſmall and reddiſh. It is a native of the Eaſt. Vaillant has deſcribed it under the name of Diototheca carlinæ foliis ex adverſo binis; Tournefort, under that of Morina Orientalis carlinæ folio.

Claſs the Second. Order the Second.

DIANDRIA DIGYNIA.

Plants which have two ſtamina and two ſtyli in each flower.

BUFFONIA.

THE calyx is a perianthium, conſiſting of four leaves; the corolla conſiſts of four petals: the ſtamina are two; the ſtyles are alſo two; and the fruit is a capſule, containing only one cell, but in it a number of ſmall ſeeds.

Of this genus there is but one known ſpecies.

BUFFONIA.

The root of this plant is oblong, ſlender, and furniſhed with a number of fibres, whitiſh and flexible. The ſtalk riſes to ſix or eight inches high, it is round, and very ſlender, yet robuſt and ſtrong enough to keep itſelf erect; this ſtalk has frequent joints, or knots, and, at each joint, there ſtand two extremely narrow, graſſy leaves; thoſe on the lower part of the ſtalk are about an inch in length, thoſe on the upper part ſcarce half ſo much; all are of a pale green colour, and terminate in a point. The ſtalks are branched toward their upper part, and ſend out many ſmaller branches from their ramifications; theſe are ſhort, and do not ſtand two oppoſite to one another, but alternately. The flowers ſtand in the alæ of the leaves; they are ſmall and white; the ſeed, which follows theſe, is ſmall and black.

This plant is found in ſome parts of England and France, but it is not common; it is an annual, and flowers in July and Auguſt. Ray calls it, Alſine polygonoides tenui folio, floſculis ad longitudinem caulis velutiin ſpicam diſpoſitis. Magnol, Polygonum anguſtiſſimo, gramineo, folio erectum; and C. Bauhine, Polygono anguſtiſſimo folio affinis.

ANTHOXANTHUM.

THE calyx of the Anthoxanthum is a bivalve glume, containing a ſingle flower: the valves are ovate, acuminated, and concave, and the inner one is larger than the other. The corolla is of the length of the larger valves of the cup, and is alſo a bivalve glume: each valve of this ſends forth a ſmall ſpine, from the lower part of it's back. The nectarium is diphyllous, and very thin, of a cylindric figure, and formed of ovated leaves, ſurrounding one another. The ſtamina are two capillary filaments of great length; the antheræ are oblong, and bifurcated at each end: the germen of the

piſtil is oblong; the ſtyles are two, and are capillary; the ſtigmata are ſimple. The glume of the corolla adheres afterwards to the ſeed, which is ſingle, roundiſh, and pointed at each end.

This is the only graſs, ſo far as is yet known, which has only two ſtamina.

Of this genus there is only one known ſpecies.

ANTHOXANTHUM.

The root is compoſed of a number of white, and not very thick, fibres: the leaves are four or five inches long, about a third of an inch broad, and of a yellowiſh-green: the ſtalk is ſlender, jointed, and ſix or eight inches high; at every joint there ſtands a leaf, like the radical ones, and, at it's top, a ſhort lax ſpike, about three quarters of an inch long, and leſs than half an inch broad, and of a browniſh, or yellowiſh-green, colour. It is a very common graſs in our meadows, and flowers early in ſpring. Ray calls it, Gramen vernum, ſpica brevi laxa.

Claſs the Second. Order the Third.

DIANDRIA TRIGYNIA.

Plants which have two antheræ, and three ſtyles in each flower.

PIPER.

THE Piper has no calyx, or, at the moſt, only an unequal receptacle, of the nature of an amentum, or catkin: there is no corolla, nor any ſtamina. The antheræ are two in number, and are roundiſh, and are placed oppoſite, at the baſe of the germen: the germen of the piſtil is large, and of an oval figure. There is no ſtyle: the ſtigma is triple, and hairy: the fruit is a round berry, having in it only one cell, in which is lodged a ſingle globular ſeed.

Of this genus there is but one known ſpecies.

PIPER. The Pepper Plant.

The root is compoſed of a number of black fibres: the ſtalks are numerous, green, ſomewhat woody, and jointed; they are not robuſt enough to ſtand erect, but lie upon the ground, unleſs ſupported, and, as they trail on the ground, they ſend out roots from the joints. The leaves ſtand ſingly at the joints, and are large, of a roundiſh figure, and have four or five high, longitudinal ribs on them: they are four inches long, three broad, and of a firm texture. The flowers are ſmall, and ſtand in cluſters, on the ſpikes; they are ſucceeded by the fruit, which is the common Pepper: twenty or thirty grains of this grow on each ſpike, and have no pedicles.

It is a native of Java, Sumatra, and Malabar; and is deſcribed in the Hortus Malabaricus, under the name of Molago Coddi.

There is a variety of this plant, the fruit of which is white: the plant, in all other reſpects, is the ſame. The common Black Pepper of our ſhops is the fruit of the firſt, and the genuine and native White Pepper of the ſecond: this genuine White Pepper, however, rarely comes to us; what we have is made by art, from the Black, by taking off the rind.

Claſs the Third.

TRIANDRIA.

Plants which have in every flower three ſtamina.

THE Triandria have ſome of them only one, ſome two, ſome three ſtyles in the flower; they are hence naturally arranged into three orders, of which the firſt comprehends, under the name of Triandria Monogynia, ſuch as have three ſtamina and one ſtyle; the ſecond, under that of Triandria Digynia, thoſe which have

have three ſtamina and two ſtyles; and the third, under that of Triandria Trigynia, ſuch as have three ſtamina and three ſtyles in each flower.

Order the Firſt.

TRIANDRIA MONOGYNIA.

Plants which have three ſtamina and only one ſtyle in the flower. Of theſe ſome have flowers neither ſpathaceous nor amentaceous; others have ſpathaceous flowers, and all that have ſo, have alſo trilocular capſules.

Claſs the Third. Order the Firſt.

Diviſion the Firſt.

Triandria Monogynia, which have flowers neither ſpathaceous nor amentaceous.

VALERIANA.

THE calyx of the Valeriana is ſcarce diſtinguiſhable; it is a mere margin, or edge, crowning the germen: the corolla conſiſts of a ſingle petal; the tube is gibbous on one ſide, and contains a ſweet juice: the limb is divided into five obtuſe ſegments: the ſtamina are three, ſometimes not ſo many; they are of a ſubulated figure, erect, and of the length of the corolla. The antheræ are round: the germen of the piſtil is placed below the receptacle; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is thick. The fruit is a deciduous, coronated capſule, which does not open, while on the plant; the ſeeds are ſingle, and of an oblong figure.

This genus comprehends the Valeriana of Tournefort and Vaillant, the Valerianella of the ſame authors, and the Valerianelloides of Vaillant.

The ſeveral ſpecies of it, however, differ very widely in the number and figure of the parts of fructification: the margin of the cup in ſome is ſo ſmall, as ſcarce to be viſible; in others it is larger, and divided into five ſegments. The tube of the corolla in ſome is very long, in others very ſhort, in ſome it has a ſpur, full of a honey juice: the limb in ſome is equal, in others it is bilabiated, and the upper lip is bifid. In ſome the ſtamina are three, in others, as in the difform flowered ones, they are only two; in ſome others there is only one ſtamen, and in ſome the flowers are of diſtinct ſexes. The ſtigma of the piſtil is, in ſome, bifid, in others emarginated, in others globular: the fruit, in ſome, is a thick capſule, in others there is ſcarce any; in ſome the capſule is bilocular. The ſeed, in ſome ſpecies, is winged with down, in ſome covered with a capſule: it's figure, alſo, frequently varies from the general oblong one.

1. *Valeriana floribus triandris, foliis caulinis, pinnatis radicalibus indiviſis.* Garden Valerian.

The Valerian with three ſtamina, and with whole and pinnated leaves.

The root of this ſpecies is oblong, of the thickneſs of a man's finger, and creeping. The plant riſes to three feet in height: the ſtalk is round, ſmooth, and hollow; the leaves, which ariſe immediately from the root, are undivided, and of an oblong figure, and conſiderably broad; thoſe which ſtand on the ſtalks are pinnated; they ſtand in pairs, at conſiderable diſtances, and have broad pedicles, which ſurround the ſtalk. The flowers ſtand on the top of the main ſtalk, and of ſeveral little branches, which ariſe from the alæ of the upper leaves; they are diſpoſed in cluſters, in form of umbels; they are ſmall and white, with a faint caſt of red ſometimes among it.

This ſpecies is a native of Alſace, and many other places in Europe; with us it is not wild, but is common in gardens. C. Bauhine calls it, Valeriana hortenſis; Lobel, Valeriana major; and J. Bauhine, Valeriana major odorata radice.

2. *Valeriana*

2. *Valeriana floribus monandris caudatis, foliis lanceolatis integerrimis.* **Red Valerian.**

The whole lanceolated-leaved Valerian, with caudated flowers, with ſingle ſtamina.

The root of this ſpecies is oblong, and of the thickneſs of a man's finger, white and hard. The plant grows to a foot and half, or more, in height: the ſtalks are round, ſucculent, of a bluiſh green, and frequently jointed and hollow. The leaves ſtand in pairs at the joints; they are broad at the baſe, where they embrace the ſtalk, and thence go ſmaller to the extremity, of a flattiſh texture, and bluiſh-green colour, and uſually even at the edges. The flowers ſtand in large cluſters; they are of a fine ſcarlet colour, and each adheres to a long peduncle: the ſeed is winged with down.

This ſpecies is a native of Italy, Germany, and other parts of Europe; with us it is common in gardens, and often propagates itſelf by it's ſeed on the walls. C. Bauhine calls it, Valeriana rubra. J. Bauhine, Valeriana latifolia rubra. Parkinſon, Valeriana rubra Dodonæi.

3. *Valeriana floribus triandris, caule dichotomo, foliis linearibus.* **Corn Sallad.**

The linear-leaved and dichotomous Valerian, with three ſtamina.

The root of this ſpecies is ſmall and oblong, and at the end is furniſhed with many fibres. The plant riſes to ſix inches high; the ſtalks are angulated, ſlender, of a yellowiſh-green, and diffuſe: the ramifications always going off two by two. The leaves ſtand in pairs on the ſtalks; they are about three quarters of an inch long, and a third of an inch, or more, in breadth; they are thin, and of a pale green. The flowers ſtand in little tufts or cluſters; about the extremities of the ſtalks, they are whitiſh and ſmall.

This ſpecies is very common with us in corn-fields, and is cultivated ſometimes in gardens, as a ſallad, under the name of Lamb's Lettice. C. Bauhine calls it, Valeriana campeſtris, inodora, major. J. Bauhine, Locuſta herba prior. Rivinus, Locuſta minor; and Gerard, Lactuca agnina. The leaves of this plant are ſometimes ſerrated, and from this variety is made a new ſpecies by authors, under the name of Valerianella præcox foliis ſerratis. It's other common varieties have alſo given riſe to ſome other imaginary ſpecies.

The other more ſingular ſpecies of Valerian are, 1. The Pyrenæan, cacalia-leaved Valerian. 2. The creeping-rooted Alpine Valerian, with undivided leaves. 3. The ſcrophularia-leaved Valerian. 4. The roundiſh-leaved, mountain Valerian. 5. The tuberous-rooted Valerian. 6. The Celtic Valerian, or Celtic Nard. 7. The narrow-leaved, red Valerian. 8. The great water Valerian. 9. The wild Valerian, with hairy leaves. 10. The ſmall water Valerian. 11. The calcitropa-leaved Valerian. 12. The broad-leaved, annual Valerian.

The Valerians are, moſt of them, good cephalics; the ninth ſpecies is one of the beſt nervous ſimples the whole materia medica furniſhes us with. The root is given, in powder, in convulſions, head-achs, and all nervous complaints, with ſucceſs.

CNEORUM.

THE calyx of the Cneorum is a ſmall permanent perianthium, compoſed of one leaf, and divided into five ſhort ſegments at the edges. The corolla conſiſts of three oblong petals, of a linear, but ſomewhat lanceolated, ſhape: they are concave, erect, and deciduous. The ſtamina are three ſubulated filaments, ſhorter than the corolla; the antheræ are ſmall. The germen of the piſtil is obtuſe and trilobous: the ſtyle is erect, firm, and of the length of the ſtamina; the ſtigma is trifid and patent. The fruit is a dry berry, of a globoſe, but ſomewhat trilobous, figure, and contains three cells, in each of which is a ſingle round ſeed. This genus takes in the chamelæa of Tournefort. There is but one known ſpecies of it.

CNEORUM.

The root of this little ſhrub is hard and woody, oblong, divided into ſeveral branches, and furniſhed with a multitude of fibres. The trunk is woody, half an inch in diameter, and covered with a ſmooth brown bark. It divides into many branches, and thoſe ſend out others ſmaller and ſhorter, and on theſe ſtand the leaves, which are oblong and broad, obtuſe at the points, and of a deep green colour: the flowers are ſmall and yellow.

This plant is a native of Spain, Italy, and ſome parts of France. It grows in many parts of Germany, alſo in dry, expoſed places. We have it in our green-houſes. C. Bauhine and others call it, Chamælæa tricoccos. Dodonæus, ſimply, Chamælæa. All the parts of this ſhrub are violently emetic and cathartic, when taken internally. In France they are given in dropſies, but ſuch violent medicines are better neglected.

HIRTELLA.

THE calyx of the Hirtella is a perianthium, conſiſting of a ſingle leaf, divided into five ſegments of a ſomewhat oval form, reflex, equal in ſize, and permanent. The corolla conſiſts of five regular petals; they are roundiſh and hollow; it is ſmaller than the cup, and deciduous. The ſtamina are three, ſetaceous, very long, and ſomewhat flatted filaments; they are permanent, and, toward the ripening of the ſeed, are twiſted ſpirally: the antheræ are orbicular. The germen of the piſtil is roundiſh, compreſſed, declinatory, and hairy: the ſtyle is filiform, and is nearly of the length of the ſtamina, and takes it's origin from the depreſſed ſide of the germen; the ſtigma is ſimple. The fruit is a berry of a kind of oval figure, broadeſt at the top, a little compreſſed, and obſcurely trigonal. The germen and the ſtyle adhere to it's baſe: the ſeed is ſingle, and of the figure of the fruit.

Of this genus there is but one known ſpecies, which is ſufficiently diſtinguiſhable by theſe characters.

OLAX.

THE calyx is a ſmall, permanent perianthium, compoſed of a ſingle leaf, and undivided at the edge: the corolla conſiſts of a ſingle petal, and is of the infundibuliform kind, and divided into three ſegments at the edge. The ſtamina are three; the ſtyle ſingle; and the nectarium is compoſed of four leaves. There is only one known ſpecies of it, which is ſufficiently diſtinguiſhable by theſe characters, nor needs any farther deſcription.

TAMARINDUS.

THE calyx of the Tamarindus is a plane perianthium, compoſed of four leaves, equal in ſize, and of an oval figure. The corolla conſiſts of three petals of an oval figure, equal, flat, plicated, patent, ſmaller than the leaves of the cup, and inſerted into them: the lower ſegment being left without one. The ſtamina are three filaments placed together in the empty ſinus of the cup; they are of a ſubulated figure, and bent towards the corolla. The antheræ are ſimple: the germen of the piſtil is oval; the ſtyle is ſubulated, and bent towards the ſtamina: the ſtigma is ſimple: the fruit is an oblong legume compreſſed, formed of a double bark, with a pulpy matter between; it contains only one cell, in which there are three angulated compreſſed ſeeds.

There is only one known ſpecies of this genus, which is the tree that produces the officinal Tamarinds.

Tamarindus.

The Tamarind-tree.

The root of the Tamarind-tree is large and brachiated, the arms ſpreading every way, and penetrating deep. The tree riſes to the height of our walnut-trees, and is

very ramoſe and diffuſe, the branches ſpreading all about. The trunk is often ſo thick, that two men can ſcarce fathom it. It's bark is of a greyiſh brown, very thick; it's wood firm and reddiſh. It's branches extend every way, in a tolerably regular order, and diffuſe themſelves a great way. The leaves are long and pinnated; compoſed of eight, ten, or twelve rows of pinnæ, with no odd leaf at the end, tho' moſt of the figures of the tree give one. The pinnæ are three quarters of an inch long, and a quarter of an inch, or more, broad; they are of a pale green, obtuſely pointed, largeſt at the baſe, and, as it were, aurited; of an acid taſte, and of a pale, but bright green, colour, ſmooth on the upper ſide, and a little hairy underneath. The flowers grow from the alæ of the leaves; they ſtand in cluſters, and are of a pale roſe colour, variegated with lines of a deeper red, or blood colour. The fruit is like a bean-pod in ſhape and ſize, and has three or four protuberances in it: it's outer bark is rigid, thick, and brown; it's inner one green and tender. The ſpace between theſe contains a thick, blackiſh, pulpy matter, of an acid taſte, which is the matter we uſe in medicine, and is intermixed with a quantity of woody fibres.

The Tamarind-tree is a native of Egypt, Arabia, and of both the Eaſt and Weſt Indies. The pulp contained between the two ſkins of the pod is an agreeable acid; it is good to quench thirſt in fevers, and is a gentle cathartic; it is an ingredient in the lenitive electuary, and other compoſitions.

MELOTHRIA.

THE calyx of the Melothria is a deciduous, campanulated, ventricoſe perianthium, conſiſting of a ſingle leaf, divided into five ſhort ſegments, and affixed upon the germen. The corolla is compoſed of a ſingle petal, and is of the rotated kind: the tube is of the length of the cup, and every-where grows to it. The limb is plane, and is divided into five very obtuſe ſegments, broadeſt toward the edge. The ſtamina are three conic filaments; they are affixed to the tube of the corolla, and are of the ſame length with it: the antheræ are didymous, roundiſh, and compreſſed. The germen of the piſtil is of an ovato-oblong and acuminated figure, and is placed under the receptacle of the flower. The ſtyle is cylindric, and of the length of the ſtamina; and the ſtigmata are three in number, thickiſh and oblong. The fruit is an oval, oblong body, divided within into three parts, and containing a number of oblong, compreſſed ſeeds.

Of this genus there is only one ſpecies, and that differs from the Monæciæ Syngeneſiæ, by it's hermophrodite ſex.

MELOTHRIA.

The root of the Melothria is compoſed of a number of thick fibres. It's ſtalk is very weak and ſlender, but it extends itſelf to a very great length, ſix feet, or more, being common to it. It either creeps upon other things by means of it's tendrils, or elſe it crawls on the ground. The leaves ſtand irregularly on the ſtalks, one at a joint; their pedicles are about an inch long: the leaves themſelves of an obtuſely triangular figure, ſnch as approaches to roundneſs; a little auriculated at the baſe, and, from one auricle to the other, about an inch and half in diameter. The length is about equal to the breadth in this part, meaſuring from the inſertion of the pedicle to the point: they are rough to the touch, ſomewhat hairy, and a little crenated about the edges, and of a duſky green colour. From the alæ of the leaves ariſe the tendrils; they are green, very thin, and form themſelves into a kind of ſpiral ſcrews: the flowers alſo ariſe from the alæ; theſe are large, and yellow, and affixed on pedicles of an inch long. The fruit is of an oval ſhape, and of the ſize of a large gooſeberry; ſmooth on the ſurface, and black, when ripe. The ſeeds are flat, and the pulp they are incloſed in is of an inſipid taſte.

This plant is common in Canada, Virginia, and Jamaica. It grows on ditch-banks, and in uncultivated places; the fruit is pickled for the table in thoſe places. It is kept in ſome of our gardens. Tournefort calls it, Bryonia Canadenſis folio angulato, fructu nigro. Plukenet, Cucumis parva, repens, Virginiana, fructu minimo; and Sir Hans Sloane, Cucumis minima fructu ovali, nigro, levi.

POLYCNEMUM.

THE calyx of the Polycnemum is a permanent, acute, ſubulated perianthium, compoſed of three leaves: the corolla is compoſed of five petals, very like the cup, but ſhorter. The ſtamina are three capillary filaments, ſhorter than the flower; the antheræ are obtuſe. The germen of the piſtil is roundiſh; the ſtyle is bifid, and of the length of the ſtamina, and the ſtigmata are obtuſe. The ſeed which follows every flower is ſingle; it remains in the cup, and has ſcarce any covering, at moſt, only a very thin membrane.

This genus comprehends the camphorata of Tournefort and Dillenius.

There is but one known ſpecies of it.

POLYCNEMUM.

The root is large and tuberous: the ſtalks are numerous, hard, woody, and a foot and half high; whitiſh, hairy, conſiderably thick, and ramoſe. They are jointed at ſmall diſtances, and the knots are thick and protuberant. The leaves ſtand very thick at theſe joints; they are ſhort, narrow, hairy, and rigid: a third of an inch is about their uſual length. The flower is ſmall and greeniſh, the apices red; the ſeed oblong and black.

It is a native of France. C. Bauhine calls it, Camphorata hirſuta. J. Bauhine, Camphorata Monſpelienſium. Lobel, Camphorata Monſpelienſium, and Chamæpeuce Plinii.

Claſs the Third. Order the Firſt.

Diviſion the Second.

Triandria Monogynia, which have ſpathaceous flowers, and trilocular capſules.

CROCUS.

THE calyx of the Crocus is a monophyllous ſpatha. The corolla is a ſimple tube, conſiſting of one petal. It's extremity is divided into ſix erect, equal ſegments, of an oblong, oval ſhape: the ſtamina are three ſubulated filaments, ſhorter than the flower; the antheræ are of a ſagittated figure. The germen of the piſtil is roundiſh; the ſtyle is filiform, and of the length of the ſtamina. The ſtigmata are three in number; they are convoluted and ſerrated. The fruit is a roundiſh, but trilobous, capſule, formed of three valves, and containing three cells in each, of which there are ſeveral round ſeeds.

1. *Crocus floribus fructui impoſitis tubo longiſſimo.*
The long-tubed Crocus, with the flowers placed on the fruit. **Saffron.**

The root of the ſaffron plant is roundiſh, and of the ſize of a nutmeg, or larger; it is white, and double or compoſed of two bulbs, one laid upon the other: the under one is always the larger; both are covered with ſome dry ſkins, and there are a number of fibres at the baſe. The leaves ariſe five, ſix, or eight from the root; they are eight inches long, as narrow as graſs leaves, and of a very deep-green colour. The ſtalk which ſupports the flower is ſhort and ſingle, one flower only grows on it's head: this is very large; the lower part of it is white, the upper part of a bluiſh purple, but in the colour there is almoſt infinite variety. The apices are yellow, and the ſtigmata are of a reddiſh-yellow colour, criſtated and fleſhy; theſe make what we call ſaffron in the ſhops. The leaves have a very ſingular character, in that a membranaceous hollowed line runs all along them.

The ſaffron plant is a native of ſome parts of Portugal, and is found wild in ſome other places. With us it is kept in gardens, and cultivated in fields to a great advantage;

tage; the Engliſh being the fineſt ſaffron in the world, and ſelling every-where at a great price. It is cultivated in Cambridgeſhire, and ſome other places, and might be in many more to very great advantage. The uſual way of propagating it is by the bulbs, a great quantity of which are produced annually: theſe bulbs are laid in the ground in ſpring, at ſix inches diſtance, or leſs; and in the firſt year they produce only leaves; but in the October, of the year following, they flower, and the ſaffron is collected from them. The flowers laſt but a day or two; after they are gone, there grow up leaves which endure the whole winter, but in ſpring fade, and are not ſeen during the whole ſummer. The time of gathering the ſaffron is morning and evening; the flowers are always gathered, as ſoon as well open, and a new ſucceſſion of them riſes daily for a month, or more. The bulbs are often taken up, after they have flowered, and kept in a dry place, in the open air, till ſpring, when they are put into the ground again.

The ſaffron produced from this flower is as powerful a ſimple as almoſt any the vegetable world affords us: it is a noble cordial, and ſudorific, and is good in nervous and hyſteric caſes. It is an ingredient in many of the compoſitions of the ſhops, and is frequent in extemporaneous preſcription.

The colour of the flower of this plant varies almoſt without end, whence there are a multitude of varieties beautiful enough, and honoured with the names of diſtinct ſpecies by authors; but theſe diſtinctions are the buſineſs of the floriſt, not of the botaniſt. Tournefort has given ſpecific names to near a hundred and fifty tulips, while in reality there is but one; and to almoſt twice as many hyacinths, while in reality there are but two ſpecies of that genus.

IXIA.

THE calyx of the Ixia is a compound ſpatha, containing ſeveral flowers. The exterior ſquammæ are larger and thicker, the interior ones thinner; the former are of an ovato-lanceolate figure, and lacerated at the edges; the latter, or interior, are alſo lacerated at the edges, and are permanent, and ſeparate the germina. The corolla conſiſts of ſix equal petals of an oblong, lanceolated figure: the ſtamina are three ſubulated filaments, of not half the length of the flower; the antheræ are ſimple. The germen of the piſtil is oval and triquetrous; it is placed under the receptacle of the flower. The ſtyle is ſimple, erect, and of the length of the ſtamina: the ſtigma is trifid and thick. The fruit is a capſule of a triquetrous, ſuboval figure, compoſed of three valves, and containing three compreſſed cells, in each of which is a ſingle roundiſh ſeed.

Ixia foliis enſiformibus, floribus remotis.
The Ixia, with ſword-like leaves, and remote flowers.

The root of this ſpecies is tuberous, an inch, or more, in diameter; branched out into many ramifications, and creeping under the ſurface of the ground. The leaves are ten or twelve inches long; they riſe in cluſters, and are an inch, or more, in breadth; broadeſt toward the baſe, and tapering all the way to a point: they are of a tough, flexile ſtructure, and pale bluiſh-green colour: the flowers are yellow, ſpotted with orange colour.

GLADIOLUS.

THE calyx of the Gladiolus is in a manner wanting; there are only two or three vague ſpathæ. The corolla conſiſts of ſix petals, which unite juſt at their baſe; they are all of an oblong figure, and obtuſe: the three upper ones bend toward one another, the three lower are reflex: the ſhort tube, which they form, when they unite at the baſe, is crooked. The ſtamina are three ſubulated filaments, inſerted into the alternate petals of the corolla; they are all covered by the connivent petals; the antheræ are oblong. The germen of the piſtil is placed below the receptacle; the ſtyle is ſimple, and of the length of the ſtamina; the ſtigma is trifid and concave. The fruit is an oblong, bellied capſule, obſcurely trigonal, obtuſe, formed of three valves,

valves, and containing three cells. The ſeeds are numerous, roundiſh, and covered with a calyptra.

This genus comprehends the Gladiolus of Tournefort, Malpighi, and Rivinus.

1. *Gladiolus foliis enſiformibus bulbo duplici.*
The ſword-leaved Gladiole, with a double bulb.

The root of this plant conſiſts of two bulbs, laid one over another; they are ſolid and fleſhy, and are covered with ſeveral reticular coats, and furniſhed with fibres at the bottom. The leaves grow in the manner of thoſe of the iris; they are long, and very narrow; ſtriated, of a bluiſh-green colour, and terminate in a point. From among theſe leaves riſes the ſtalk; it is round, ſlender, ſucculent, green, and two feet high. The flowers ſtand in a long ſeries toward the top of this ſtalk, ſix or eight in number: they are large, and of a beautiful roſe colour, but with more brightneſs than the roſe. They ſtand at an inch, or more, diſtance from one another, and all hang on one ſide of the ſtalk: the whole plant has a ſweetiſh, and ſomewhat acrid, taſte.

It is a native of Spain, Italy, and ſome parts of France. C. Bauhine calls it, Gladiolus floribus uno verſu diſpoſitis. J. Bauhine, Gladiolus ſive Xiphion. Parkinſon, Gladiolus Narbonenſis.

2. *Gladiolus foliis latis bulbo ſimplici.*
The broad-leaved Gladiole, with a ſingle bulb.

The root of this ſpecies is a ſingle bulb, large, compreſſed, ſolid, covered with a few membranes, and furniſhed with ſeveral fibres. It's fleſhy part is of a deep red; it's taſte very acrid and burning. The leaves are oblong and broad, a foot and half in length, and two inches in breadth; they are of a bluiſh-green colour, and firm texture. The ſtalk grows from among them, and is uſually ſimple, ſometimes ramoſe; it is rounded, green, and very brittle: the flowers are large, and ſtand in double rows; they are of a deep purple on the outſide, and of a deep yellow, with ſome purple lines, within. The whole ſtalk is of a deep blackiſh purple, and the flowers ſtand on ſhort purple peduncles, covered each by two blackiſh-red leaves.

This is a native of the Cape of Good Hope; it is met with, however, in ſome of our ſtoves. C. Bauhine calls it, Gladiolus maximus Indicus; and Cornutus, Gladiolus Æthiopicus flore coccineo.

The other ſpecies of the Gladiolus are, 1. The great, Turkiſh, purple Gladiole. 2. The dwarf broad-leaved Gladiole. 3. The dwarf graſſy-leaved Gladiole. Theſe ſeem to be really diſtinct ſpecies: but, beſide theſe, Tournefort and others give names to ſeveral varieties of one or other of theſe, under the opinion of their being diſtinct ſpecies. The flowers are ſometimes white, ſometimes of a deeper, and ſometimes of a paler, red; and this, and their different diſpoſition, has given origin to theſe imaginary ſpecies.

ANTHOLYZA.

THE Antholyza has no calyx; there are only ſome vague, alternate, imbricated, and permanent ſpathæ, which ſeparate the flowers. The corolla conſiſts of a ſingle petal: the baſe of it is a tube, which by degrees expands into a large, compreſſed, and ringent mouth. The upper lip is ſtrait, very long, ſlender and undulated, and at it's baſe has two ſhort laciniæ: the lower lip is ſhorter, divided into three ſegments, and the lower or middle one of theſe is propendent. The ſtamina are three long ſlender filaments; two of them are lodged under the upper lip, one upon the lower: the antheræ are acute. The germen of the piſtil ſtands under the receptacle: the ſtyle is filiform, and has the ſame length and ſituation with the two upper filaments: the ſtigma is trifid, capillary, and reflex. The fruit is a roundiſh, but obſcurely trigonal, capſule, formed of three valves, and containing three cells; in each of which are ſeveral angular ſeeds.

Of this genus we know only one ſpecies, which has been uſed to be ranked among the Gladioli.

ANTHOLYZA.

The root of this plant is compoſed of two fleſhy bulbs, one lying over the other, and both ſurrounded with two or three reticular membranes. The leaves are eight or ten inches long, and not more than two thirds of an inch in breadth; they are of a bluiſh or greyiſh-green colour, and are broadeſt at the baſe, and terminate in a point. The ſtalk riſes from among theſe; it is ten, twelve, or more, inches in height, round, of a pale green, of the thickneſs of a large packthread, and hairy. The flowers ſtand in a long ſeries at the top, ſix or eight one over another, at ſome diſtance. They are large, and of an extreamly beautiful crimſon colour.

This is a native of Æthiopia, but we have it in ſome of our ſtoves. Commelin calls it, Gladiolo Æthiopico ſimilis planta, anguſtifolia, caule hirſuto, flore rubicundiſſimo; and Breynius, Gladiolus floribus rictum referentibus, coccineis, ſuprema lacinia erecta fiſtuloſa.

IRIS.

THE Iris has no calyx; there are only ſome alternate, ſimple, imbricated, permanent ſpathæ, which ſeparate the flowers. The corolla is divided into ſix parts: the petals are oblong and obtuſe: the three exterior ones are reflex, the interior are erect, and more acute; they all adhere by their ungues or baſes. The ſtamina are three ſubulated filaments, lying on the reflex petals: the antheræ are oblong, ſtrait, and depreſſed; the germen of the piſtil is oblong, and placed beneath the receptacle; the ſtyle is ſimple, and very ſhort; the ſtigma is very large, and divided into three ſegments, which reſemble petals; they are broad and reflex: their apices are bifid. The fruit is an oblong angular capſule, compoſed of three valves, and formed into three cells, in each of which is contained a number of large ſeeds.

The nectarium, in ſome ſpecies of the Iris, is a longitudinal, hairy line on the baſe of the reflex petals; in others it is formed of three melliferous ſpots on the external part of the flower, near the baſe. The capſule in ſome is trigonal, in others it is hexagonal.

This genus comprehends the *Iris*, the *Xiphion*, the *Siſyrinchium*, and the Hermodactylus of Tournefort. The parts of fructification in all theſe are the ſame, the root and leaves only differ. In the Xiphion, the root is bulbous, and the leaves are ſubulated. In the Siſyrinchium, the root is compoſed of two bulbs laid one on the other. In the Hermodactylus, the root is tuberous, and the leaves tetragonal; and, in the Iris, the root is fleſhy, oblong, and creeping, and the leaves are enſiform.

1. *Iris corollis barbatis, caule foliis longiore multifloro.* **Common Flower de Luce.**
The bearded-flowered Iris, with many flowers on a ſtalk longer than the leaves.

The root of the common Iris is large, fleſhy, tuberous, and creeping; it is of an inch in diameter, and it creeps juſt under, or upon, the ſurface of the earth, with numerous ramifications joining in an irregular manner one to another. It is brown on the outſide, white within; very juicy, and of a very acrid and pungent taſte. The leaves ariſe in tufts, eight or ten together; they are near two feet long, about an inch broad, and of a pale green colour: they are broadeſt at the baſe, and terminate in a point. The whole cluſter of leaves unite at the baſe, receiving one another into their cavities. From the center of theſe leaves riſes a ſtalk of near three feet in height, round, ſucculent, and green, but covered with a whitiſh duſt, that eaſily rubs off: there are five or ſix joints in this ſtalk, at each of which ſtands a ſingle, ſhort leaf, and often it divides at top into two or three branches, on each of which there are two or three of thoſe ſhort leaves, which are affixed by no pedicle, but ſurround the ſtalk at the baſe. The flowers ſtand on the tops of theſe ſtalks; they are of a deep violet purple, and very large.

This is a native of ſome parts of Germany; it is common with us in gardens. C. Bauhine calls it, Iris vulgaris Germanica ſive ſylveſtris. J. Bauhine, Iris vulgaris violacea.

2. *Iris*

2. *Iris radice duplice bulboſa, foliis anguſtis mollibus.*
The double bulbous Iris, with ſoft, narrow leaves.

This is one of the ſpecies of Iris, commonly called Siſyrinchia. The root is compoſed of two moderately large bulbs, one lying upon the other; at the time when the plant is in flower, the upper one is larger, and more ſucculent, and the under one flaccid: the taſte is ſweetiſh and pleaſant, and the root eſculent. The leaves are long, and very narrow; they grow ſeveral together from the ſame root, and uſually lie upon the ground: they are ſtriated, ſoft to the touch, tender as the leaves of garlick, and of a deep green colour. The ſtalk is round, ſmooth, and firm, about ſix or eight inches high: the flowers are large, and of a fine deep blue, with three ſpots of yellow; four or five of them grow on every ſtalk, but only one opens generally at a time.

This ſpecies is a native of Spain; we have it frequently in our gardens, where it ſtands very well in the open beds. C. Bauhine calls it, Siſyrinchium majus flore lutea macula notato. Cluſius, Siſyrinchium majus; and J. Bauhine, Iridi bulboſæ affinis ſiſyrinchium majus.

3. *Iris tuberoſa radice, foliis tetragonis.*
The tuberous-rooted and tetragonal-leaved Iris.

This is the ſpecies of Iris, which Tournefort has formed a ſeparate genus of, under the name of Hermodactylus. It's root is tuberous, and compoſed of ſeveral oblong and thick pieces, odly joined together, ſometimes all united to a kind of head, and reſembling four or five fingers; from this there riſe three or four leaves, near two feet in length, and very ſlender; hard, rigid, and of a quadrangular ſhape, terminating in a ſharp point, and, when full grown, often drooping their tops to the ground. They are of a bluiſh-green colour, and at the baſe they are ſmaller than elſewhere, and ſurrounded with three or four membranes. The ſtalk riſes in the midſt of theſe; it is ſlender, rounded, and ſtriated; two leaves firmly ſurround it from the baſe almoſt to the top, receiving it into their ſinus's: toward the top there are two knots in it, placed near one another; theſe have each riſing from it a membranaceous, hollowed leaf; the lower of theſe is the larger. The flower is moderately large: the three reflex petals are of a fine, deep, gloſſy black; the others are greeniſh, or whitiſh, with a tinge of black.

This ſpecies is a native of Egypt and Arabia; we have it in ſome of our gardens, but it is not common. C. Bauhine calls it, Iris tuberoſa; and J. Bauhine, Iris tuberoſa Belgarum.

4. *Iris foliis margine conniventibus corollis imberbibus.* **Blue bulbous Iris.**
The hollow-leaved Iris, with the edges almoſt meeting.

This is one of thoſe Iris's called, by Tournefort and others, Xiphion. The root of this ſpecies is large and roundiſh, fleſhy, and covered with ſeveral black membranes: the leaves are large, broad, and carinated, or hollowed; the middle of the hollow is uſually covered with a kind of ſilver-like drops. The edges almoſt meet with one another, ſo as to give it the appearance of a round, hollow leaf, like that of a leek. The ſtalk is ſufficiently thick, but infirm and tender, and is uſually ſurrounded with four or five leaves: it grows to ten or twelve inches high, and ſometimes has only one, ſometimes two, flowers, rarely more on it. Theſe are large, and very beautiful, of a deep violet purple; ſometimes indeed paler, and ſometimes white, under which variation the plant has been deſcribed as a diſtinct ſpecies, and even when pale red, or ſtriated, as others.

This is a native of Spain, but it ſucceeds very well in our gardens. C. Bauhine calls it, Iris bulboſa cæruleo-violacea. J. Bauhine, Iris bulboſa tota violacea vel cærulea; and Tournefort, Xiphium cæruleo-violaceum.

Theſe four ſpecies may give a diſtinct idea of the principal diſtinctions of the genus, as they are ſelected from among thoſe diſtinguiſhed by authors, who have paid more regard to the roots and leaves of plants, than to their parts of fructification, into different genera. The other ſpecies of the Iris are very numerous, and their varieties

deſcribed

deſcribed under the name of diſtinct ſpecies: more ſo, of thoſe called by authors Iris: the principal are, 1. The great, black and white-flowered Iris. 2. The blue, Aſiatic, many-flowered Iris. 3. The great, broad-leaved, blue, Roman Iris. 4. The yellowiſh German Iris. 5. The elder-ſmelling Iris. 6. The broad-leaved Iris, with no leaves on the ſtalks. 7. The dwarf purple Iris. 8. The dwarf yellow Iris, variegated with purple. 9. The great-flowered, white, Florentine Iris. 10. The common, yellow, water Iris, or flag-flower. 11. The ſtinking Iris, or gladwin. 12. The great maritime Iris. 13. The narrow-leaved Iris. 14. The greeniſh-yellow-flowered, Pyrenæan Iris. 15. The dwarf red-flowered Iris. 16. The dwarf variegated Iris. 17. The dwarf Iris, with pale yellow flowers. 18. The broad-leaved Iris, without a ſtalk.

Of thoſe called Siſyrinchia are, 1. The great Siſyrinchium, with flowers ſpotted with white. 2. The little Siſyrinchium.

Of the Hermodactylus, there is no ſpecies but that deſcribed above; and, finally, of thoſe called Xiphia, the principal are, 1. The blue Iris, without a ſtalk. 2. The early, variegated, Perſian Iris. 3. The blue, taller Iris. This, as well as the firſt ſpecies, varies into white, and pale red, and variegated flowers. 4. The broad-leaved, tall Xiphion. 5. The large-leaved and large-flowered Xiphion. 6. The narrow-leaved Xiphion. 7. The great, yellow-flowered Xiphion. 8. The little, blue Xiphion. 9. The yellow and black Xiphion.

The root of the common blue Iris, freſh, is a very violent cathartic, but, where the conſtitution can bear ſuch a medicine, will do great ſervice in dropſies. The Florentine Orrice or Iris root is the dried root of the ſame ſpecies, growing in a warmer climate. It is peeled, and carefully prepared in the drying; it is eſteemed a very good pectoral and attenuant, and is not only common in extemporaneous preſcription, but is an ingredient in many of the ſhop compoſitions.

COMMELINA.

THE calyx of the Commelina is a very large, permanent ſpatha, compreſſed, connivent, and cordated. The flower conſiſts of ſix petals: the three exterior ones are ſmall, of an oval figure, concave, and reſemble a perianthium; the three interior ones are placed alternately with theſe, and are large, roundiſh, and coloured. The nectaria are three in number, and they reſemble ſo many antheræ; they ſtand on filaments, and are cruciform and horizontal. The ſtamina are three ſubulated filaments, reclinate, and agreeing in ſhape with the filaments of the nectaria, but placed below them: the antheræ are of an oval figure. The germen of the piſtil is roundiſh: the ſtyle is ſubulated, revolute, and of the length of the ſtamina: the ſtigma is ſimple. The fruit is a naked, globoſe, but triſulcoſe capſule, formed of three valves, and containing three cells, in each of which there are two angular ſeeds.

This genus comprehends the Commelina of Plumier and Dillenius, and the Zanonia of Plumier. The number of the parts is variable; if the petals are only four, ſmall, and equal, a third of the number of the other parts is to be excluded, and unity added to the nectarium, and all is right: in the Zanonia, the three exterior petals ſtand on the germen, and remain in figure of a perianthium; the three interior ones are equal.

1. *Commelina erecta corolla ampliore.*
The erect Commelina, with a large flower.

The root is perennial, not creeping, but compoſed of a number of thick fibres, whitiſh and hairy. The radical leaves are ſix inches long, and two and a half broad, narrow at the baſe, and pointed at the ends. The ſtalk is round, ſtriated, and grows to two feet high: it is robuſt and erect. The leaves ſtand ſingly; they ſurround the ſtalk at the baſe, and are three inches long, and an inch broad, ribbed longitudinally, pointed at the extremity, and of a deep green. The flowers ſtand at the tops of the ſtalks and branches, and ariſe from among cluſters of leſſer leaves: they are of a pale blue, and of the breadth of a ſhilling: the antheræ are yellow. It is a native of Virginia. Dillenius calls it, Commelina erecta ampliore ſubcæruleo flore.

The other ſpecies are, 1. The annual, ſoapwort-leaved, procumbent Commelina. 2. The red-jointed, orpine-rooted Commelina. 3. The narrower-leaved Commelina. 4. The deep-flowered Commelina.

Paderota

Justicia

Pinguicula

Piper

Antholyza

Cyperus

Scirpus

Milium

Rumphia

Valeriana

Tamarindus

Iris

Gladiolus

Montia

Xyris

Tillea

B. Cole Sculp.

XYRIS.

THE calyx of the Xyris is a ſpike of a roundiſh ſhape, compoſed of ſquammæ of a round concave figure, imbricated, and ſerving to ſeparate the flowers. The glume is ſmall and bivalve; the valves are navicular, compreſſed, arcuated, acute, and connivent. The corolla conſiſts of three petals, which are plane, patent, large, and crenated, and have narrow ungues of the length of the calyx. The ſtamina are three ſlender filaments, ſhorter than the corolla: the antheræ are erect and oblong. The germen of the piſtil is roundiſh, the ſtyle is filiform, and the ſtigma is triple. The fruit is a capſule contained within the cup; the figure round, and compoſed of three valves, and containing three cells; in each of which are a number of minute ſeeds.

Of this genus there is only one known ſpecies.

XYRIS.

The root is compoſed of a few white fibres: the leaves are five or ſix inches long, and half an inch broad at the bottom; from thence they grow narrower to the extremity, where they terminate in a point. They are ribbed longitudinally, of a whitiſh colour at the bottom, and of a beautiful green all the way up beſide. The ſtalks are angular, and about a foot high; they are alſo whitiſh at the bottom, and green upwards: they are naked, and have no branches; at the top of each ſtands a head, of the bigneſs of a nutmeg, or more. Theſe are formed of ſquammoſe leaves, and from the alæ of theſe grow the flowers, which are of the breadth of a ſixpence, and of a bright, ſhining yellow.

It is a native of Malabar, and grows in watery places. It is deſcribed in the Hortus Mal. V. 9. p. 139, under the name of Kortsjiletti-pullu.

Claſs the Third. Order the Firſt.

Diviſion the Third.

Triandria Monogynia, the flowers of which have an imbricated amentum, and naked ſeeds.

SCHÆNUS.

THE calyx of the Schænus is a common glume, containing ſeveral flowers; it is permanent, large, erect, and attenuated, and is compoſed of two valves. The proper corolla conſiſts of ſix petals, which are permanent, of a lanceolated figure, acute, and connivent; unequal in ſize and ſituation, diſpoſed in a kind of imbricated manner, and the exterior ones ſhorter than the reſt. The ſtamina are three capillary filaments; the antheræare oblong and erect. The germen of the piſtil is of a triquetrous, oval form, and obtuſe; the ſtyle is ſetaceous, and of the length of the corolla; the ſtigma is trifid and ſlender. There is no pericarpium; the ſeed is ſingle, gloſſy, of an oval, but ſomewhat triquetrous, form, and largeſt in the upper part, and is contained, till ripe, in the corolla. This genus comprehends the Cyperella and Pſeudo-Cyperus of Micheli.

There is a ſpecies of this genus, in which certain ſhort ſetæ form the proper receptacle round the ſeed.

1. *Schænus culmo ſubtriquetro folioſo, floribus faſciculatis, foliis ſetaceis. The faſciculated-flowered, triquetrous-ſtalked Schænus, with ſetaceous leaves.*

The root of this ſpecies conſiſts of a few black fibres, formed at the top into a kind of head; from this riſe a great number of oblong, and very narrow, leaves; from among theſe grows a ſtalk a foot, or fourteen inches, high, obſcurely three-cornered in ſhape, and conſiderably hard, rigid, and firm. This has two or three joints, and from

each of theſe there grows a leaf like thoſe which riſe immediately from the root, only ſmaller; from the alæ of thoſe leaves riſe ſtalks of two or three inches long, and very ſlender; on the top of each of theſe ſtands a cluſter of flowers, in form of a little umbel; and on the top of the main ſtalk ſtand two or three ſuch cluſters or umbels. The flowers are very ſingular in their appearance; being of a fine bright white, they give this a different look from all the other graſſes.

This elegant graſs is a native of England, and moſt other parts of Europe; it grows in boggy grounds. Scheukzer calls it, Gramen cyperoides paluſtre leucanthemum. Vaillant, Juncus paluſtris floribus albis.

2. *Schænus culmo tereti, foliis margine et dorſo aculeatis.*
The round-ſtalked Schænus, with leaves prickly at the back and edges.

The root of this ſpecies is long, of the thickneſs of a gooſe-quill, and creeps a great way under the ſurface of the earth. The ſtalk is round, geniculated, and four, five, or ſix feet high: the leaves are very long; thoſe on the ſtalks are a foot long, and half an inch wide, carinated, and terminate in a point: the back and edges are ſerrated and prickly. The tops of the ſtalks are ornamented with large panicles of flowers, like thoſe of millet. The ſeeds are ſmall and black.

This ſpecies is a native of England, but it is not common; it grows in boggy places. Haller calls it, Mariſcus. C. Bauhine, Cyperus longus, inodorus, Germanicus.

3. *Schænus culmo tereti nudo, capitulo ovato, involucri diphylli valvula altera ſubulata longa.*
The round-ſtalked Schænus, with an oval head, and one of the valves of the flower long and ſubulated.

The root of this ſpecies is compoſed of a number of blackiſh fibres, collected into a kind of tuft. The leaves are four inches long, and triangular; they grow in great tufts. Among theſe riſe the ſtalks; they are eighteen inches, or more, in height, and each ſupports a ſingle head, of an oval figure, and brown colour. The ſeeds are whitiſh; the lower part of the ſtalks and leaves are uſually purpliſh.

This ſpecies is not unfrequent in boggy grounds with us. Linnæus calls it, in his H. Cliff. Schænus floſculis ſpicatis. Moriſon, Juncus lævis panicula glomerata nigricante; and Haller, Carex ſpica multipartita calycibus ſpicularum bifoliis. Scheuckzer, Junco affinis capitulo glomerato nigricante.

CYPERUS.

THE calyx of the Cyperus is an imbricated ſpike, formed of oval, carinated, plano-inflex ſquammæ, ſeparating the flowers: there is no corolla. The ſtamina are three very ſhort filaments. The antheræ are oblong and ſulcated. The germen is very ſmall; the ſtyle is filiform and very long; the ſtigmata are three in number, and capillary. There is no pericarpium. The ſeed is ſingle, of a triquetrous form, acuminated, and has no hairs or villi.

This genus comprehends the Cyperus of Micheli and Tournefort, and the Melanoſchænus of Micheli, and is very nearly allied to the Scirpus and Eriophorus kind.

1. *Cyperus culmo triquetro folioſo, panicula folioſa ſupra decompoſita, pedunculis nudis, ſpicis alternis.* Long Cyperus.
The three-ſquare ſtalked Cyperus, with a ramoſe panicle, and alternate ſpikes.

The root of this ſpecies conſiſts of a number of oblong, geniculated branches, ſpreading various ways, and entangling irregularly with one another; theſe are ſucculent, tender, and of a blackiſh colour, and to theſe are affixed a number of fibres, ſome of which ſuſtain tuberous bodies of an oval ſhape, and of the ſize of a walnut. From the upper part of the oblong branches of the root, ariſe leaves of an oblong, narrow, and carinated figure. The ſtalk riſes in the midſt of theſe, and is ſmooth,

and

and of a trigonal figure, ſtriated on the ſurface, and filled with a white pith within. On the top of this ſtalk ſtand a number of leſſer leaves, arranged into the form of a radiated ſtar; and from the center of theſe riſes the panicle, which is very diffuſe, and branched, and conſiſts of alternate ſpikes affixed to naked pedicles.

This ſpecies is frequent in England, and many other parts of Europe. It grows in wet places. C. Bauhine calls it, Cyperus odoratus radice longa. J. Bauhine, Cyperus panicula ſparſa ſpecioſa.

2. *Cyperus culmo triquetro nudo, panicula folioſa ſupra decompoſita, ſpicis confertis diſtiche compreſſis.*

The triquetrous, naked-ſtalked Cyperus, with a folioſe, ramoſe panicle, and compreſſed, diſtichous ſpikes.

This is a very elegant ſpecies of Cyperus, though not a large one. It's root is compoſed of a number of ſlender, oblong branches, creeping under the ſurface of the ground. The leaves are ſix inches long, ſlender, and carinated; the ſtalk riſes to five or ſix inches high, and is terminated by a very ramoſe panicle, which is of a yellowiſh colour, and is formed of a number of ſhort, compreſſed ſpikes.

This is frequent in boggy places in Ireland, and elſewhere. C. Bauhine calls it, Gramen Cyperoides minus panicula ſparſa ſubflaveſcente. J. Bauhine, Gramen parvum pulchrum panicula lata compreſſa. The panicle of this is ſometimes blackiſh, in which ſtate it has been deſcribed by authors, under the name of a different ſpecies.

3. *Cyperus culmo triquetro folioſo, panicula decompoſita minore, ſpicis diſtichis.*

The triquetrous, folioſe-ſtalked Cyperus, with a ſmaller, decompound panicle.

Round Cyperus.

The root of this ſpecies conſiſts of a number of tuberous bodies, of an oval figure, and of the bigneſs of a large olive; of a browniſh colour, ſucculent, and ſtriated on the ſurface; which are hung to oblong fibres one above another, in the manner of the roots of the filipendula. The leaves are large, two feet long, three quarters of an inch broad, and deeply carinated: they are of a duſky green colour, and very rigid. The ſtalks ariſe to two or three feet high, and have on their ſummits a radiated ſet of ſhort leaves, from among which riſes the panicle: this is leſs compound than thoſe of the others before deſcribed; the peduncles are ſhort and ſlender, and the ſpikes diſtichous, and of a duſky brown colour.

This is a native of Arabia and Egypt; it is no where ſo plentiful as about the borders of the Nile. C. Bauhine calls it, Cyperus rotundus orientalis major; and Proſper Alpinus, Cyperus Hadneg Ægyptis.

The other more ſingular ſpecies of Cyperus are, 1. The round-rooted, narrow-leaved, eſculent Cyperus. 2. The graſſy Cyperus. 3. The golden, panicled, American Cyperus. 4. The dwarf Cyperus, with panicles very cloſely preſſed together. 5. The thin, panicled Cyperus. 6. The Cyperus, with a diffuſe panicle, and narrow, ſhort locuſtæ. 7. The broad-leaved, great Cyperus.

The roots of the Cyperi are all carminative and attenuant. Thoſe of the firſt and third ſpecies are uſed in medicine, under the names of Cyperus longus, and Cyperus rotundus. They promote the menſes, and are good in all chronic caſes ariſing from obſtructions of the viſcera.

SCIRPUS.

THE calyx of the Scirpus is an imbricated ſpike, conſiſting of oval ſquammæ, of a plano-inflex figure, ſeparating the flowers: there is no corolla. The ſtamina are three oblong filaments; the antheræ are oblong. The germen of the piſtil is very ſmall: the ſtyle is filiform and long; the ſtigmata are three, and capillary: there is no fruit. The ſeed, after every flower, is ſingle, and of a triquetrous figure, acuminated, and has villi, or hairs, on it, longer than the cup; theſe villi are it's great diſtinction from the Cyperus: they are in ſome ſpecies affixed to the baſe of the ſeed, in others to it's apex.

This

This genus comprehends the Scirpus of Micheli and Tournefort, and the Scirpocyperus of Micheli.

1. *Scirpus culmo triquetro folioſo, panicula folioſa, pedunculis nudis ſupra decompoſitis, ſpicis confertis.*
The triquetrous, folioſe-ſtalked Scirpus, with a folioſe, ramoſe panicle, and thick-ſet ſpikes.

The root of this ſpecies is compoſed of a number of blackiſh, hard, and ſtrong fibres. The ſtalk riſes to a foot and half, or two feet, in height, and is ſurrounded, from it's baſe half way up, with leaves: theſe are oblong, broader than in the common graſs, and carinated, and they terminate in a point. At the top of the ſtalk there ſtand a number of ſhorter leaves, diſpoſed in a radiated manner like a ſtar, and from the center of theſe riſes the panicle, which is very ramoſe and diffuſe, and compoſed of ſhort and thick-ſet ſpikes affixed to naked peduncles. The panicle is very large, and makes a beautiful appearance.

It grows by river ſides in ſome parts of England, but is not very common. C. Bauhine calls it, Gramen Cyperoides miliaeum; and J. Bauhine, Cyperus gramineus.

2. *Scirpus culmo tereti nudo, ſpicis plurimis pedunculatis terminatricibus.* Bulrush.
The naked, round-ſtalked Scirpus, with numerous, pedunculated ſpikes.

The root of this ſpecies is extreamly large and thick, of a dark, blackiſh-red colour on the outſide, and white within; it creeps, a long way horizontally, under the ſurface of the ground: from this ariſe a great number of ſtalks. They are round, ſmooth, and green, without knots or joints, and of four, five, or ſix feet high, ſoft to the touch, and full of a white, ſpungy pith. They are largeſt at the bottom, and gradually ſmaller to the top, where there ſtands a panicle compoſed of a number of brown, harſh, ſhort ſpikes, affixed to moderately long and naked peduncles.

This ſpecies is common in almoſt all ſtanding waters, and about the edges of rivers. C. Bauhine calls it, Juncus maximus ſeu ſcirpus major. Van Royen, Scirpus ſpicis copioſis.

3. *Scirpus culmo tereti nudo, ſpica ſubovata, imbricata, terminatrice.* Club Rush.
The naked, round-ſtalked Scirpus, with an oval, imbricated ſpike on it's ſummit.

The root of this ſpecies is oblong, ſlender, and creeping, and is furniſhed with a great number of fibres. From this ariſe ſeveral ſtalks, ſome a foot and half high, ſome not more than four inches; theſe are round, ſmooth, and full of a ſpungy pith, and are reddiſh at the bottom, elſwhere green. On it's ſummit ſtands a ſpike of an oval figure, and brown colour, of the bigneſs of a horſe-bean.

This ſpecies is very frequent in rivers and ponds, and in damp grounds. C. Bauhine calls it, Juncus capitulis equiſeti. Haller, Scirpus caule aphyllo, ſpica imbricata terete.

The other more ſingular ſpecies of Scirpus are, 1. The tall Scirpus, with ſerrated leaves. 2. The pentagonal-ſtalked Scirpus, flowering at the joints. 3. The geniculated, hollow-ſtalked Scirpus. 4. The Scirpus, with round, umbellated heads. 5. The Sea-Scirpus, with round-cluſtered heads. 6. The ſhort-headed, Mountain Scirpus. 7. The ſhort-headed, dwarf Scirpus. 8. The hairy-ſpiked Scirpus.

ERIOPHORUM.

THE calyx of the Eriophorum is an imbricated ſpike, formed of plano-inflex ſquammæ, of an oblong, oval figure, ſeparating the flowers: there is no corolla. The ſtamina are three capillary filaments; the antheræ are erect, and of an oblong figure.

figure. The germen of the piſtil is very ſmall; the ſtyle is filiform, and of the length of the ſquammæ of the cup. The ſtigmata are three in number; they are longer than the ſtyle, and are reflex. There is no pericarpium: the ſeed is triquetrous and acuminated, and has hairs on it longer than the ſpike.

1. *Eriophorum culmo folioſo tereti, foliis planis.* **Cotton Graſs.**
The round and folioſe-ſtalked Eriophorum, with flat leaves.

The root of this ſpecies is compoſed of a number of reddiſh-brown fibres. From this riſe ſeveral flat, graſſy leaves, and among theſe the ſtalk; this is a foot, or more, in height, and is round, ſmooth, and in all things reſembles a ſmall ruſh: on the top of this ſtands a panicle, which, when ripe, is of the ſize of a walnut, and white as ſnow. It is compoſed of ſeveral ſpikes ſtanding on oblong pedicles, and ſeems formed of the fineſt white cotton, or of a ſubſtance ſtill finer than that.

This ſpecies is not unfrequent with us in boggy grounds. C. Bauhine calls it, Gramen pratenſe tomentoſum panicula ſparſa. Tournefort, Linagroſtis panicula ampliore; and Haller, Linagroſtis foliis planis, ſpicis multiplicibus.

2. *Eriophorum culmis teretibus, vaginatis, ſpica membranacea.* **Horſetail Ruſh.**
The round, vaginated-ſtalked Eriophorum, with membranaceous ſpikes.

The root of this ſpecies conſiſts of a great number of fibres of a brown colour, penetrating deep into the earth: the leaves are ruſhy and ſmall, and terminate in a point. Among a cluſter of theſe riſes the ſtalk, which grows to ſix, eight, or ten inches high, ſometimes more; it is round, ſtriated, and tender, and about it's baſe has ſeveral leaves ſurrounding it. At the top of each ſtalk ſtands a ſpike, compoſed of a number of ſquammæ, which are hoary, and covered with a tomentoſe matter, and feel as ſoft as velvet: the whole looks of a beautiful white.

This ſpecies is found on boggy ground, in ſeveral parts of England. C. Bauhine calls it, Juncus Alpinus capitulo lanuginoſo ſive ſchænolaguros. Moriſon, Gramen juncoides lanatum Danicum. Linnæus, in his Fl. Lap. calls it, Eriophorum ſpica erecta, caule tereti.

3. *Eriophorum culmis triquetris nudis, ſpica pappo breviore.*
The triquetrous, naked-ſtalked Eriophorum, with ſpikes ſhorter than the down.

The root of this ſpecies is compoſed of a number of ſmall, brown fibres, joined into a tuft at the top. From this ariſe a number of oblong, ſlender leaves, of a triangular form, and in the center of theſe ten or twelve ſtalks, not exceeding three or four inches in height. Theſe are triquetrous, green, ſoft, and filled with a ſpungy pith, and at the top of each ſtands a ſhort ſpike erect, formed of ſquammæ, and furniſhed with a fine ſnow white, and tolerably long cottony matter.

This ſpecies is not found in England, but in Denmark, Sweden, and ſome parts of Germany it is not uncommon. C. Bauhine calls it, Juncus Alpinus bombycinus. Haller, Linagroſtis foliis triquetris, ſpica unica oblonga. Linnæus, in his Fl. L. Eriophorum ſpica erecta, caule triquetro.

Claſs the Third. Order the Second.

TRIANDRIA DIGYNIA.

Plants which have three ſtamina and two ſtyli in each flower. Of theſe ſome have only one flower in each calyx, ſome ſeveral in every one.

Diviſion the Firſt.

Triandria Digynia, which have only one flower in each calyx.

BOBARTIA.

THE calyx is imbricated, and contains only a ſingle flower. The corolla is a glume, compoſed of two valves, and placed upon the germen: the ſtamina are three moderately long, ſlender filaments: the antheræ are thick and oblong: the germen is of an oval figure. The ſtyles are two, oblong and ſlender; the ſtigmata are rough; the ſeed is ſingle, and of an oval figure. Of this genus there is only one known ſpecies.

BOBARTIA.

The root is a cluſter of browniſh fibres, not very long, crooked, and tough; the radical leaves are long, moderately broad, ribbed, and of a dull duſky green. The ſtalk is round, hollow, jointed, and has four or five leaves on it, one at each joint, like the radical ones, but ſmaller. The flowers are numerous, not very large, and of a pale greyiſh-green.

It flowers in Auguſt and September.

CORNUCOPIA.

THE calyx of the Cornucopia is a common perianthium, formed of one leaf, very large, and of an infundibuliform ſhape; it's mouth is crenated, obtuſe, and patenti-erect. The glume is formed of two valves, and contains only one flower; the valves are oblong, obtuſely pointed, and equal. The corolla is formed of a ſingle valve, and, in figure, ſituation, and ſize, greatly reſembles one of the valves of the cup. The ſtamina are three capillary filaments; the antheræ are oblong: the germen of the piſtil is turbinated: the ſtyles are capillary, and the ſtigmata cirroſe. There is no pericarpium: the corolla includes the ſeed, which is ſingle, of a turbinated figure, convex on one ſide, and plane on the other.

This genus includes the Cornucopioides of Scheukzer.

There is only one known ſpecies of it.

CORNUCOPIA.

The root is a congeries of thick and tough fibres, ſpreading various ways under the earth; the radical leaves are ſix or eight inches long, very narrow, and pointed at the extremities, of a firm ſubſtance, and pale green colour: the ſtalk is round and ſmooth, and grows to a foot and half high; at it's top is placed a cluſter of flowers, conſiderably large, and at firſt compact, afterwards much expanded.

It grows in wet places in the Eaſt. Petiver, who received it from Smyrna, calls it, Juncus clavatus vaginatus; and Monti, Gramen cornutum orientale.

NARDUS.

THE Nardus has no calyx. The corolla is formed of two valves: the exterior is long, and of a lanceolato-linear figure; it terminates in an ariſta, or awn, and contains within it the other, which is ſmaller, and terminates in a ſhorter awn. The ſtamina are three capillary filaments, ſhorter than the corolla: the antheræ are oblong: the

Class 6 & 7 Hexandria & Heptandria.

Yucca foliis Margine integerrimis

Esculus floribus Heptandris

Tradescantia

Leucoium

Anthericum

Scilla

Aloe

Allium

Erythronium

Pontederia

Leontopetalon

Hemerocallis

Aphyllanthes.

B. Cole sculp.

the germen of the piſtil is oblong. The ſtyles are two in number, capillary, reflex, and hoary: the ſtigmata are ſimple: the ſeed is ſingle, of a linear, oblong figure, narrower at top than at bottom, and pointed at each end; the corolla ſurrounds it, by way of a pericarpium.

1. *Nardus ſpica recta.*
The upright-ſpiked Nardus.

The root of this ſpecies is compoſed of a number of duſky coloured, creeping fibres. From this riſe a cluſter of leaves very ſmall and narrow, not more than three or four inches in length, and among theſe a number of ſtalks: theſe are ſurrounded at their baſe with leaves, and there appear ſomewhat thick; but, where they are naked, they are thin and tender. They do not riſe to more than five or ſix inches in height, and have no knots; from the middle to the top of theſe ſtalks reaches the ſpike. It is erect and ſlender, compoſed of oblong and rigid glumes, ſtanding in a ſeries on one ſide of the ſtalk, and all pointing one way. The leaves riſe from the root, three or four together in a cluſter, and are ſurrounded with a thin membrane of a whitiſh colour: they uſually droop toward the earth, when they leave theſe vaginæ. This ſpecies is frequent in England, and indeed throughout all Europe; it grows in dry paſtures, eſpecially in hilly places, and is of no value or uſe to the farmer, being too ſhort and low to be reached with the ſcythe. C. Bauhine calls it, Gramen ſparteum juncifolium. Moriſon, Gramen ſparteum junceo folio et minus. Other authors have diſtinguiſhed it into two ſpecies, a larger and a ſmaller, but without reaſon.

SACCHARUM.

THE Saccharum has no calyx, but, in the place of one, it has a downy matter, including the flowers ſingly, and exceeding them in length. The corolla is compoſed of two valves, equal in ſize, and without awns; they are of an oblong, lanceolated figure, and hollowed, erect, and acuminated. The ſtamina are three capillary filaments, of the length of the corolla: the antheræ are oblong: the germen of the piſtil is ſubulated: the ſtyles are two in number, and cirroſe: the ſtigmata are ſimple. There is no pericarpium; every flower is ſucceeded by a ſingle ſeed, of an oblong, narrow, and acuminated figure, which it contains within it.

Of this genus there is but one known ſpecies.

Saccharum.
The ſugar Cane.

The root of the ſugar Cane is thick, oblong, geniculated, and furniſhed with many fibres. It runs obliquely under the ſurface of the ground, and is ſucculent, and very ſweet to the taſte. The plant riſes to eight or nine feet high: the ſtalk is round, jointed, and two or three inches in diameter at the bottom. The joints are three or four inches aſunder; and ſometimes, when the ſoil is rich, they are more. The colour is a greeniſh-yellow, and at the knots it is yellow in one part, and whitiſh on the other: the knots themſelves ſwell out beyond the reſt of the ſtalk, and the whole ſtalk is full of a whitiſh, ſucculent, and very ſweet matter. The leaves ſtand ſingly at the joints; they are very large, three feet in length, and but narrow in proportion; they ſtand erect, and are of a yellowiſh-green colour, ſomewhat ſcabrous on the ſurface, and wrapped about the ſtalk at their baſe. The top of the ſtalk is furniſhed with ſeveral leaves, and from among them produces a panicle very ramoſe, and of three feet in length.

The ſugar Cane is a native of the Eaſt Indies, the Canary Iſlands, and of the warmer parts of America, and is propagated by culture in many other places. It loves a rich and damp ſoil. In ſome places, particularly in the province of Rio de la Plata, the ſugar canes grow to the height and thickneſs of trees, and, in hot weather, cryſtals of ſugar are found on their ſurface. The ſtalk of this plant, bruiſed and preſſed, yields a ſweet liquor, which, boiled to a dryneſs, and properly refined, affords all our ſeveral kinds of ſugar.

PHALARIS.

PHALARIS.

THE calyx of the Phalaris is a glume, compoſed of two valves, and containing a ſingle flower. It is very large, compreſſed, and obtuſe: the valves are navicular, compreſſed, carinated, obtuſe above, and have ſtrait edges, which run parallelly, and are ſomewhat connivent. The corolla is bivalve, and is ſmaller than the calyx: the exterior valve is oblong, acuminated, and convoluted; the interior is ſmaller. The ſtamina are three capillary filaments, ſhorter than the cup; the antheræ are oblong: the germen is roundiſh; the ſtyles are two; they are capillary, and the ſtigmata are villoſe. Inſtead of a pericarpium, the corolla itſelf adheres firmly round the ſeed, and does not open in any part. The ſeed is ſingle, ſmooth, and of a roundiſh, but acuminated, figure.

This genus comprehends the Plalaroidea of Scheukzer and Monti.

In ſome ſpecies there is alſo a ſmall calycine glume, bivalve, acuminated, and very ſmall, within the calyx deſcribed here.

1 *Phalaris radice annua.* **Canary Graſs.**
Phalaris, with an annual root.

The root of this ſpecies is formed of a little cluſter of tender, white fibres. It grows to a foot and half, or more, in height. It's ſtalk is ſlender, green, round, and jointed, in four or five places. At every one of the joints ſtands a ſingle leaf, oblong, narrow, and terminating in a point, like the leaves of the reſt of the graſſes. At the head of every ſtalk ſtands a ſingle, beautiful ſpike, an inch in length, of a turbinated figure, and formed of ſquammæ large and beautiful, variegated with a pale green and white.

This ſpecies is not a native of England; but in the Canary Iſlands, and in many of the warmer parts of Europe, it grows in the corn-fields, and in other dry places. C. Bauhine calls it, Phalaris major ſemine albo. J. Bauhine, and others, ſimply, Phalaris.

2. *Phalaris panicula oblonga.*
The oblong, panicled Phalaris.

The root of this ſpecies is oblong, jointed, and creeping; the joints ſend out a number of fibres, which make their way deep into the mud, while the body of the root runs along but juſt under the ſurface. The plant riſes to four or five feet in height; it's ſtalk is very like that of the common reed, round, jointed, and ſmooth; the joints are ſix or ſeven on each ſtalk, and from each there grows a long and narrow graſſy leaf, of a deep green colour; this ſurrounds the ſtalk at it's baſe, and, when it leaves it, is an inch in breadth, and ſeven or eight in length. The upper ſurface of the leaf is ſmooth, but, if the finger be drawn over the under ſide, ſome roughneſs will be perceived. At the top of the ſtalk ſtands a panicle, not very diffuſe, of a purpliſh or whitiſh colour, and of ſix or ſeven inches in length.

This ſpecies is common with us about waters. C. Bauhine calls it, Gramen arundinaceum ſpicatum. Moriſon, Gramen arundinaceum aceroſa gluma.

3. *Phalaris ſpica cylindrica.*
The cylindric-ſpiked Phalaris.

The root of this ſpecies is compoſed of a cluſter of fine white fibres. The ſtalk riſes to a foot and half, or more, in height; it is bulbous, as it were, at the bottom; ſlender, round, and jointed all the way up. The leaves, which grow immediately from the root, are ſix or eight inches long, of a pale greyiſh-green colour, and of a third of an inch in breadth, firm, and a little rough to the touch: at every joint of the ſtalk grows ſuch a leaf alſo, but ſhorter, ſurrounding the ſtalk a long way before it leaves it. The top of the ſtalk is terminated by a long, ſlender ſpike, not ill repreſenting the tail of a rat, four inches in length, and not ſo thick as a man's little finger,

of

of a greyiſh colour. This is ſoft to the touch, if the hand be drawn up; but very rough, if the contrary way.

This ſpecies is frequent with us in paſtures and meadows; it loves a damp ſoil. C. Bauhine calls it, Gramen typhoides aſperum. J. Bauhine, Gramen cauda muris majoris longa majus.

PHLEUM.

THE calyx of the Phleum is a bivalve glume, containing a ſingle flower; it is oblong, linear, compreſſed, and opens with two points at the apex. The valves are ſtrait, hollow, equally compreſſed, and they terminate in ariſtæ, or awns. The corolla conſiſts of two valves, and is ſhorter than the cup: the exterior valve is larger than the interior, and ſurrounds it. The ſtamina are three capillary filaments, longer than the cup: the antheræ are oblong, and bifurcated. The germen is round; the ſtyles are two, and are capillary and reflex; the ſtigmata are plumoſe. There is no pericarpium; the calyx and corolla include the ſeed, which is ſingle and roundiſh.

This genus comprehends the Typhoidea of Scheukzer.

1. *Phleum ſpica cylindracea longiſſima.*
The very long cylindric-ſpiked Phleum.

The root of this ſpecies is a ſmall, white tubercle, to which are affixed a great number of capillary fibres, white and inſipid to the taſte. The plant riſes to two or three feet in height. It's ſtalk is ſlender, round, green, and, when the ſpike is full grown, is ſcarce able to ſupport itſelf erect. The leaves which grow immediately from the root are ten or twelve inches long, and about a third of an inch broad: the ſtalk has three or four joints, and at each of them a leaf ſurrounding it a great way, then ſeparating from it, and reſembling the others; the top is terminated by a ſpike of four or five inches long, of the thickneſs of a man's little finger, and green at firſt, but white, when ripe.

This is not met with in England; in Germany, France, and Italy, it is common. It grows among buſhes. C. Bauhine calls it, Gramen typhoides maximum ſpica longiſſima.

2. *Phleum ſpica ovali-cylindracea.*
The oval-ſpiked Phleum.

The root of this ſpecies conſiſts of a few fibres, whitiſh and divaricated at their extremities. The leaves are five inches long, and about a quarter of an inch in diameter; ſharp-pointed, and of a greyiſh-green colour. The ſtalk riſes to ten or twelve inches in height, and is ſlender, ſmooth, and jointed; at every joint ſtands a leaf, ſurrounding it ſtalk a great way. The part which ſurrounds the ſtalk is, indeed, in the upper leaves, longer than the reſt. The top is terminated by a ſhort ſpike, of an oblong figure, tending to oval; three quarters of an inch long, and about a third of an inch in diameter, ſmaller at the top than at the bottom; this is greeniſh at firſt, and appears hairy from the ariſtæ of the glumes; when fully ripe, it is black.

This is frequent in Germany, Sweden, and Lapland. I have alſo met with it at the ſide of a wood belonging to the ſeat of Th. H. Apreece, Eſq; at Waſhingley in Huntingtonſhire. Scheukzer calls it, Gramen typhoides Alpinum ſpica brevi denſa et veluti villoſa. Rudbeck, Gramen typhoides Alpinum ſpica nigra brevi.

ALOPECURUS.

THE calyx of the Alopecurus is a bivalve glume, containing a ſingle flower. The valves are hollow, of an ovato-lanceolated figure, equal in ſize, and compreſſed. The corolla is univalve: the valve is concave, and of the length of the cup, and has a very long ariſta inſerted into it's back, near the baſe. The ſtamina are three capillary filaments: the antheræ are bifurcated at each end. The germen is roundiſh; the ſtyles are two in number; they are cirrous and reflex, and longer than the cup; the

ſtigmata are ſimple. There is no pericarpium. The corolla itſelf remains, and contains the ſeed, which is ſingle, and of a roundiſh figure.

This genus comprehends the Myoſmordea of Scheukzer.

1. *Alopecurus culmo erecto.*
The erect-ſtalked Alopecurus.

The root of this ſpecies conſiſts of a few white fibres, collected into a cluſter, and penetrating deep into the earth, but, ſeveral plants of it uſually growing together, the whole often forms a tuft of very conſiderable extent; from this there riſe a great number of leaves, long, narrow, ſmooth, and pointed at the ends. Among theſe riſe up ſtalks of different height; ſome two feet, or more, ſome leſs than a foot: they are round, ſlender, hollow, and ſmooth, of a pale green, and have four or five joints each. The joints are leſs protuberant than in moſt of the other ſpecies, and are each furniſhed with a ſingle leaf, which ſurrounds the ſtalk a great way before it leaves it. The top of the ſtalk is terminated by a long and very ſlender ſpike, three or four inches in length, and about a third of an inch in thickneſs. It is ſoft to the touch, and of a purple colour. The ſtalks are frequently alſo purple.

This ſpecies is frequent with us in corn-fields. C. Bauhine calls it, Gramen typhoides ſpica anguſtiore. Moriſon, Alopecuroides ſpica longa tenuiore. Scheukzer, Gramen ſpicatum ſpica cylindracea, tenuiſſima, longiore.

2. *Alopecurus culmo infracto.* **Spiked Float-grass.**
The crooked-ſtalked Alopecurus.

The root of this ſpecies is a cluſter of ſmall, crooked, white, branched fibres. From theſe riſe a cluſter of leaves, ſix or eight inches long, a quarter of an inch broad, and of a fine green colour. From among theſe grows a ſtalk, round, hollow, and of a pale green colour: this grows to two or three feet in length, but does not ſtand erect; it is crooked from joint to joint, and frequently touches the ground at every, or almoſt every, joint; taking root, when it does ſo, and propagating itſelf abundantly. Every joint has it's ſeparate ſingle leaf, incloſing and ſurrounding the ſtalk a great way, and, when ſeparated from it, four, five, or more, inches long, and of a pale greyiſh-green colour. At the top of the ſtalk ſtands a ſpike, two or three inches long, and very ſlender, ſoft to the touch, and of a pale greyiſh-green colour.

This ſpecies is frequent with us; it uſually grows in wet places, ſometimes in the water: when it grows in water, it's ſtalks are very long and crooked, and it's lower leaves uſually wanting. C. Bauhine calls this, Gramen aquaticum, geniculatum, ſpicatum. Others, Gramen fluviatile ſpicatum. Linnæus, in his Fl. Laponica, calls it, Alopecurus ariſtis gluma longioribus; and a variety of it with ſhorter awns, Alopecurus ariſtis glumæ equalibus: this laſt always grows in water.

PANICUM.

THE calyx of the Panicum is an involucrum, conſiſting of ſeveral leaves, and containing only a ſingle flower: the leaves are capillary, and unequal in their inſertion. The glume contains only a ſingle flower: it is compoſed of three valves; they are all of an ovato-acuminated figure, and the third is ſmaller than the reſt, and placed behind one of the others. The corolla conſiſts of two valves of an ovato-acuminated figure, one ſmaller and flatter than the other. The ſtamina are three ſhort capillary filaments; the antheræ are oblong. The germen is roundiſh; the ſtyles are two in number, and capillary. The ſtigmata are plumoſe: the corolla ſupplies the place of a pericarpium, adhering firmly every way to the ſeed, which is ſingle, roundiſh, and flat on one ſide.

This genus comprehends the Panicea of Scheukzer. The flat valve of the corolla is, in ſome of the ſpecies, terminated by an ariſta; and there is one ſpecies that has no involucrum.

1. *Panicum floribus conglomerato-ſpicatis, levibus, ariſta dimidio brevioribus.*

The conglomerate-ſpiked Panic, with flowers not half ſo long as the ariſtæ.

The root of this ſpecies is compoſed of a great tuft of fibres, white, thin, branched, and penetrating every way into the ground, whence it is not eaſy to get them up. From theſe riſe a cluſter of ſhort, graſſy leaves, harſh to the touch, and of a whitiſh-green colour; and among theſe ſeveral ſtalks, round, jointed, of a pale green colour, and ſeldom exceeding five or ſix inches in height, often not above three or four. Every ſtalk has two or three joints, and at it's bottom is often procumbent, and takes root at thoſe which touch the ground. The ſeveral joints have each their ſingle, ſhort, narrow, and pointed leaf, of a pale greyiſh-green colour, and ſurrounding the ſtalk at the baſe. The top of the ſtalk is terminated by a ſpike, ſhort and thick, of a browniſh, or reddiſh, colour, rough to the touch, covered with prickly awns and even, ſticking to people's cloaths, who come in the way of it.

This ſpecies is common with us in damp paſtures. C. Bauhine calls it, Gramen panicum ſpica aſpera. Tournefort, Panicum ſpica ſimplici et aſpera; and Van Royen, Panicum ſpica compoſita ariſtis ſpica longioribus.

2. *Panicum ſpicis alternis, remotis, declinatis, compoſitis.*

The compound, declinated, alternate, and remote-ſpiked Panic.

The root of this ſpecies is a tuft of conſiderably large, white fibres, which ſpread every way in the earth, and fix themſelves very firmly there; there riſe from this a cluſter of leaves, long, narrow, and of a pale green colour; among theſe riſes a ſtalk, or ſometimes ſeveral, of three, four, or even five feet in height, ſmooth, round, green, jointed, and hollow; at every joint of this ſtalk ſtands a leaf, which ſurrounds it a long way at it's baſe, and afterwards extends to ſix or eight inches in length, and is of a pale green colour, and pointed at the extremity. At the top of the ſtalk ſtands a large cluſter of ſpikes, in the whole four or five inches in length, of a reddiſh, or blackiſh, colour, and formed of a number of ſhort ſpikes, placed very cloſe to one another. This ſpecies varies, ſometimes having ariſtæ on the ſpikes, ſometimes not. C. Bauhine has unneceſſarily made two ſpecies of it, from this variation.

It is frequent in damp places, and about the ſides of ponds and rivers, in England, and moſt other parts of Europe. C. Bauhine calls it, Gramen Paniceum ſpica diviſa. Tournefort, Panicum vulgare ſpica multiplici aſperiuſcula, and Spica multiplici longis ariſtis circumvallata.

3. *Panicum panicula laxa, flaccida, foliorum vaginis pubeſcentibus.*

The lax and flaccid panicled Panic, with the vaginæ of the leaves hoary. **Millet.**

This, though the plant which produces the common Millet, is properly, according to all it's characters, of the Panic kind; it's root conſiſts of a number of large and thick fibres. The plant riſes to two, three, or more feet in height: it's ſtalk is round, jointed, and hollow; the joints ſtand very cloſe to one another. The leaves are a foot, or more, in length, and an inch broad: they are hairy, all over, but principally in that part where they ſurround the ſtalk: they are ſtriated, and ſomewhat rigid. At the top of the ſtalk ſtands a large lax panicle, hanging in great part downward. It is of a dark blackiſh colour, and the pedicles are very long and ſlender.

This is known in many parts of Europe for the uſe of the table; it loves a light, rich ſoil. C. Bauhine calls it, Milium ſemine luteo; and deſcribes three other of it's varieties with a white, a black, and a yellowiſh red ſeed, under the name of ſo many different ſpecies.

4. *Panicum*

4. *Panicum ſpica compoſita ariſtis floſculo brevioribus.* Panic.
The compoſit-ſpiked Panic, with awns ſhorter than the flower.

The root of this ſpecies is compoſed of a cluſter of conſiderably thick fibres, white and ramoſe, and penetrating deep into the ground. The ſtalk riſes to four feet in height; it is round, jointed, hollow, and of a pale green colour; the joints ſwell out conſiderably beyond the reſt of the ſtalk, and ſtand pretty frequent. There are often ſix or eight of them on the ſtalk; at each of theſe ſtands a ſingle leaf, which ſurrounds it for two inches, or more, at the baſe, and then grows from it long, and three quarters of an inch in breadth, pointed at the end, and of a freſh and agreeable green colour. At the top of the ſtalk grows a panicle of a foot, or more, in length, but not very broad; it is ſo heavy, and it's peduncles ſo tender and weak, that it uſually bends toward the ground. It is of a gloſſy ſurface, and is ſometimes of a whitiſh, ſometimes of a yellowiſh, ſometimes of a reddiſh, colour, and the ſeed varies in colour in the ſame manner.

This is cultivated in many parts of Germany, and elſewhere; it loves a rich ſoil. It is a native of the Eaſt Indies, but thrives very well with us. Cluſius calls it, Panicum vulgare. C. Bauhine, Panicum Italicum ſive panicula majore.

MILIUM.

THE calyx of the Milium is a glume compoſed of two valves, and containing only a ſingle flower. The valves are of an ovated figure, and acuminated. The corolla conſiſts of two valves, and is ſmaller than the cup; the valves are oval, and one of them is larger than the other. The ſtamina are three very ſhort capillary filaments; the antheræ are oblong. The germen of the piſtil is roundiſh; the ſtyles are two, and are capillary; the ſtigmata are formed like pencils: the corolla adheres to the ſeed, and ſupplies the office of a pericarpium: the ſeed is ſingle and roundiſh. The Milium differs from the panic, in that it's calyx has only two valves, that of the panic three.

1. *Milium floribus diſperſis.* Millet
The ſcattered-flowered Millet. Graſs.

The root of this ſpecies is thick, and of a reddiſh colour, and is furniſhed with a great number of fibres. The ſtalk is round, green, jointed, and ſmooth, and riſes to three feet in height. The joints ſtand at conſiderable diſtances from one another, and at each there is a leaf which ſurrounds the ſtalk for a great way at the baſe, and, when it leaves the ſtalk, it is half an inch broad, and four or five inches long. At the top of the ſtalk grows a panicle four or five inches long, and as much in diameter; ſometimes conſiderably larger, formed of ſmall flowers, and of a browniſh colour.

This ſpecies is frequent with us in woods, and ſometimes in corn-fields. C. Bauhine calls it, Gramen ſylvaticum panicula miliacea ſparſa. Lobel, Miliaceum gramen; and Linnæus, in his Hort. Cliff. Milium glumis dyphyllis.

AGROSTIS.

THE calyx of the Agroſtis is a glume, conſiſting of two valves, and incloſing a ſingle flower; it is of an acuminated figure. The corolla is alſo of an acuminated figure, and compoſed of two valves: it is ſcarce ſo long as the cup, and one of the valves is larger than the other, and ariſtated. The ſtamina are three capillary filaments, longer than the corolla; the antheræ are furcated. The germen is roundiſh; the ſtyles are two in number; they are reflex and hairy, and the ſtigmata are like them. The corolla ſerves in the place of a pericarpium; it ſurrounds, and every way incloſes, the ſeed, which is ſingle, roundiſh, and pointed at each end.

1. *Agroſtis petalo exteriore ariſtam rectam, ſtrictam, longiſſimam exſerente.*
The Agroſtis, with an extreamly long and fine ariſta, growing from the exterior petal.

The root of this ſpecies conſiſts of a number of long, whitiſh, crooked, and divaricated fibres. The ſtalk riſes to three or four feet in height; it is naturally of a yellowiſh-green colour, but often reddiſh. It is round, hollow, and jointed in two or three places. At every joint there ſtands a ſingle leaf, which ſurrounds the ſtalk a long way, and, when it leaves it, hangs down to a foot in length; it is narrow, and of a pale green colour; at the top of the ſtalk ſtands a panicle a foot, or more, in length, compoſed of very gloſſy flowers, uſually brown, ſometimes yellow, ſometimes of a fine purple. From the root there grow a great cluſter of leaves of a deeper green colour than thoſe on the ſtalks, and a foot and half in length,

This ſpecies is not unfrequent with us in woods, and ſometimes among corn, or even in meadows. C. Bauhine calls it, Gramen ſegetum altiſſimum panicula ſparſa. J. Bauhine, Gramen capillatum.

2. *Agroſtis panicula oblonga, petalo exteriori baſi villoſo, ariſta torta calyce longiore.*
The oblong, panicled Agroſtis, with the exterior petal hairy at the baſe, and with a crooked, long awn.

The root of this ſpecies conſiſts of a cluſter of white fibres, very long, and ſpreading under the ſurface. From theſe riſe a number of leaves a foot and half in length, and about half an inch in diameter, thin, and of a deep green colour. Among theſe riſe ſeveral ſtalks; they grow to four or five feet high, and are round, hollow, tender, and have three or four joints. At every joint there ſtands a ſingle leaf, which, at the baſe, ſurrounds the ſtalk for a great way, and, when it leaves it, is half an inch broad, and grows to eight or ten inches in length; at the top of the ſtalk ſtands a long and large panicle, contracted into the form of a ſpike, of a brown, or purpliſh-white, colour, and very gloſſy. From the middle of the back of the exterior petal, there riſes a fine crooked or twiſted awn, which is ſomewhat longer than the calyx.

This ſpecies is common in many parts of Europe, but leſs ſo in England than elſewhere. I have met with it in ſome of the woods in Leiceſterſhire. Scheukzer calls it, Gramen avenaceum montanum panicula anguſta et dilutiſſima, fuſco-albicante et pappoſa.

3. *Agroſtis culmo repente foliis radicalibus breviore, folii ſupremi vagina ventricoſa.*
The creeping-ſtalked Agroſtis, with leaves longer than the ſtalks, and with a bellied vagina.

The root of this ſpecies is compoſed of a cluſter of moderately large fibres. From this grow a great number of leaves a foot and half in length, not half an inch broad, and of a gloſſy green colour. Among theſe riſe a great number of ſtalks, round, hollow, jointed, and not more than eight or ten inches in height. Each ſtalk has two or three joints, and at every joint there ſtands a ſingle leaf, the baſe of which ſurrounds the ſtalk, and which is about three inches long, after it leaves it. The one or two under leaves form ſimple vaginæ round the ſtalk, like the other graſſes; but the upper one is not a ſimple, but an inflated, vagina, ſwelling out into a kind of belly; this is uſually of a whitiſh green, ſometimes purpliſh. At the top of the ſtalk ſtands a ſhort and ſoft ſpike, of a greeniſh colour, and ſoft to the touch.

This ſpecies is very frequent in moſt parts of Europe, but leſs ſo in England than elſewhere. I have found it, in ſome plenty, at the ſide of Waſhingley wood. Scheukzer calls it, Gramen caninum ſupinum minus. Parkinſon, Gramen caninum ſupinum arvenſe.

LAGURUS.

THE calyx of the Lagurus is a glume, containing a ſingle flower, and conſiſting of two valves of an oblong, linear figure, compreſſed, very thin, patulous, and each terminating in a briſtle, pennated with ſeveral fine hairs. The corolla is alſo a bivalve glume; it is thicker than the cup: the exterior valve is long, and terminates in two ariſtæ, which are ſmall and ſtrait. The back of the ſame valve alſo ſends out from it's middle a third ariſta, of a reflex, twiſted figure: the interior valve is ſmall and acuminated.

The ſtamina are three capillary filaments; the antheræ are oblong. The germen of the piſtil is turbinated; the ſtyles are two in number, and ſetaceous: the ſtigmata are villoſe: the corolla ſerves the office of a pericarpium, and incloſes the ſeed, which is ſingle, oblong, and ariſtated. This genus comprehends the Alopecuroidea of Scheukzer.

Lagurus ſpica ovata.
The oval-ſpiked Lagurus.

The root of this ſpecies is compoſed of a great many fine white fibres. From this grow a number of leaves, four or five inches long, a third of an inch broad, and of a pale green colour: among theſe riſe the ſtalks, three, four, or more, from the ſame root; they grow to two feet, or more, in height, and are round, jointed, and hollow. At every joint there ſtands a ſingle leaf, ſurrounding the ſtalk with it's baſe, and growing three or four inches long from it; theſe, as well as the leaves, riſing immediately from the root, are very ſoft to the touch, and are covered with fine ſhort hairs. At the top of every ſtalk ſtands a ſingle ſpike, of about two inches long, and ſo thick, that it looks almoſt roundiſh. It is of a greyiſh-green colour, and furniſhed with a great number of ariſtæ, which ſtand a little way out from it.

This ſpecies is common in Italy and Germany, but is not a native of England. C. Bauhine calls it, Gramen alopecuroides ſpica rotundiore.

DACTYLIS.

THE calyx of the Dactylis is of a roundiſh figure, obtuſe, and larger than the flower. It contains ſometimes only one flower, ſometimes two, and is formed of two valves, equal in ſize, but the exterior one ſomewhat bellied. The corolla is an obtuſe glume, compoſed of two valves, and covered by the calyx: the exterior valve is broader, and more bellied than the interior one, which is ſmaller and flatter. *The* ſtamina are three capillary filaments, of the length of the corolla: the antheræ are bifurcated. The germen of the piſtil is of a turbinated form; the ſtyles are two; they are capillary and patent: the ſtigmata are plumoſe. There is no pericarpium: the calyx and corolla both ſurround the ſeed, and at a proper time let it out. It is ſingle, roundiſh, depreſſed on one ſide, and convex on the other.

Some of the ſpecies of this genus have one flower in each glume, ſome two.

1. *Dactylis ſpicis numeroſis alteris patentibus, calycibus uniflоris.*
The numerous, alternate-ſpiked Dactylis, with uniflorous cups.

The root is a congeries of white and tough fibres: the leaves are long, narrow, thin, and of a bright green; the ſtalk is round, jointed, and tall; the top of it ſuſtains a long and large panicle, compoſed of a number of alternate ſpikes of a whitiſh, or greyiſh, green, conſiderably thick and naked. It is a native of Jamaica and New Spain. Sir Hans Sloane calls it, Gramen Dactylon majus panicula longa, ſpicis plurimis nudis craſſis.

The other ſpecies are, 1. The four-ſpiked Dactylis of Barbadoes. 2. The Dactylis, with two narrow, linear ſpikes, terminating the ſtalk. 3. The Dactylis, with numerous alternate ſpikes cloſe to the ſtalks.

TRIANDRIA DIGYNIA.

Division the Second.

Such as have a number of flowers contained in every calyx.

MELICA.

THE calyx of the Melica is a glume, compoſed of two valves, and containing two flowers. The valves are of an oval figure, hollow, and nearly equal in ſize. The corolla is compoſed alſo of two valves; they are of an oval figure, not ariſtated, and one of them is hollow, the other flat. The ſtamina are three capillary filaments, of the length of the flower: the antheræ are oblong, and bifurcated at each end. The germen is of an ovato-turbinated figure: the ſtyles are two; they are ſetaceous and patent: the ſtigmata are oblong and villoſe. There is no pericarpium; the corolla includes the ſeed, which is ſingle, and of an oval figure, and, when mature, lets it fall out.

Melica floribus ſub culmo pendulis.

The Melica, with flowers pendulous under the ſtalks.

The root of this ſpecies is long, ſlender, and creeping; it runs a long way under the ſurface of the earth, and in it's progreſs ſends out a number of fibres. The ſtalk riſes ſingle, to the height of a foot, or more: it is very ſlender, round, hollow, jointed, and of a purple colour toward the bottom, green every-where elſe. At every joint there ſtands a ſingle leaf, which incloſes the ſtalk in a kind of vagina at the baſe, and grows from it to the length of three, four, or five inches; there are uſually three ſuch leaves on a ſtalk; a few leaves riſe alſo immediately from the root, and are ſhorter than thoſe of the ſtalk; both are very narrow. The ſtalk terminates in a kind of ſpike, very ſlender, and of a purpliſh colour, formed of a ſeries of flowers, all hanging on one ſide. It uſually ſtoops a little at the top, and the flowers ſtand ſingly on very ſlender peduncles.

This ſpecies is frequent in the woods in many parts of Europe; we have it in England, but it is more rare with us. I have met with it in Waſhingley-wood in Huntingtonſhire. C. Bauhine calls it, Gramen avenaceum locuſtis rubris montanum.

AIRA.

THE calyx of the Aira is a glume, formed of two valves, equal in ſize, of an ovato-lanceolated figure, and acuminated; it contains two flowers. The corolla is compoſed of two valves, extreamly reſembling thoſe of the cup; one of theſe often produces an ariſta, near twice as long as the flower. The ſtamina are three capillary filaments, of the length of the flower: the antheræ are oblong, and furcated at each end. The germen of the piſtil is oval; the ſtyles are two; they are ſetaceous and patent. The ſtigmata are hoary: the corolla ſerves the office of a pericarpium, and incloſes the ſeed, which is ſingle, and of an oval figure. There are ſome ſpecies of this genus, in which male flowers are mixed with theſe hermaphrodite ones, under the ſame common cup; in this caſe the male flower produces an ariſta, the female does not.

1. *Aira panicula rara, calycibus albis.*

The open panicled Aira, with white cups.

The root of this ſpecies conſiſts of a multitude of thin and long blackiſh fibres. From this grow four, five, or more, leaves, a foot long, and ſcarce a tenth of an inch broad, of a deep green colour, and covered with a few ſcattered white hairs. Among theſe riſes a ſtalk a foot and half high, and very ſlender, ſo as ſcarce to be able to ſupport itſelf; on the ſummit of this ſtalk ſtands a looſe, open panicle, compoſed of a few flowers, the cups of which diſtinguiſh themſelves, at a diſtance, by their fine white colour.

This

This ſpecies is frequent in ſome parts of Europe, but we have it not in England. C. Bauhine calls it, Gramen nemoroſum paniculis albis, capillaceo folio; and Scheukzer, Gramen Alpinum nemoroſum paniculatum, foliis anguſtiſſimis locuſtis ſplendentibus ariſtatis.

2. *Aira panicula rara, calycibus fuſcis.*
The looſe-panicled Aira, with brown cups.

The root of this ſpecies is compoſed of a multitude of ſmall white fibres; from this grow a cluſter of twenty, or more, leaves, five or ſix inches long, extreamly narrow, and ſomewhat rounded; among theſe riſe three or four ſtalks; they are very ſlender, and grow to five, ſix, or eight inches high; on every ſtalk there ſtand two, three, or four leaves, very narrow, and of a duſky green; and at the top a looſe panicle, compoſed of ſmall ſhining cups, of a purpliſh colour toward the baſe, and paler in the other parts, and collected together in form of a ſpike.

This is found in the woods in Germany, but it is not common in England. Scheuckzer calls it, Gramen avenaceum paniculatum Alpinum, foliis capillaceis brevibus locuſtis purpuro-argenteis, ſplendentibus, et ariſtatis.

3. *Aira foliis pubeſcentibus, panicula contracta, floſculo hermophrodito mutico, maſculo ariſta uncinata calyce breviore.*
The ſoft, hoary-leaved Aira, with male flowers armed with ſhort ariſtæ, and female without any.

The root of this ſpecies is compoſed of a number of large white fibres, which ſpread themſelves every way under the ſurface. From this grow ſix or eight leaves, ſix inches, or more, in length, about a third of an inch in breadth, very ſoft to the touch, and covered with a fine, ſhort, ſoft hoarineſs. Among theſe riſes a ſtalk of a foot and half, or more, in height; round, hollow, ſlender, and jointed: at every joint ſtands a ſingle leaf, which ſurrounds the ſtalk at it's baſe, and grows from it to four or five inches in length: both the ſtalk itſelf, and theſe leaves, are covered with the ſame white, hoary matter, with the lower leaves. At the top ſtands a panicle of a whitiſh, or pale reddiſh, colour, an inch and half long, and half an inch in diameter, ſoft to the touch, like the reſt of the plant.

This ſpecies is extreamly common with us every-where, in meadows and paſtures. Dalechampe calls it, Gramen lanatum. C. Bauhine, Gramen pratenſe paniculatum molle; and Van Royen, Aira floſculo maſculo ariſtato, fœminino mutico.

POA.

THE calyx of the Poa is a glume, containing ſeveral flowers, arranged into a double or diſtichous ſpike, of an oblong, oval figure. It is formed of two valves, of an ovato-acuminated figure, and without awns. The corolla is compoſed of two valves, of an ovato-acuminated figure, hollow, compreſſed, and ſomewhat longer than the cup, and without awns. The ſtamina are three capillary filaments; the antheræ are bifurcated. The germen of the piſtil is roundiſh: the ſtyles are two; they are reflex and hairy, as are alſo the ſtigmata. The corolla ſupplies the place of a pericarpium; it adheres every way to the ſeed, which is ſingle, of an oblong figure, compreſſed, and pointed at each end.

1. *Poa panicula diffuſa, ſpiculis trifloris glabris, culmo erecto tereti.* **Great Meadow Grass.**
The erect Poa, with ſmooth, diffuſe, triflorous ſpiculæ.

The root of this ſpecies conſiſts of a great number of capillary, whitiſh fibres, variouſly entangled one with another; from theſe ariſe a large cluſter of leaves, ſix or eight inches long, and a quarter of an inch broad. The ſtalk riſes from the midſt of theſe; it grows to about a foot and half in height, and is ſmooth, green, hollow, and jointed in three or four places. At every joint ſtands a leaf, whoſe baſe makes a vagina, ſurrounding

ſurrounding the ſtalk for three inches, ſometimes much leſs. From this it grows to three or four inches long, and is of the ſame breadth with the radical leaves, and pointed at the end. At the top of the ſtalk ſtands a panicle, diffuſed every way, but not drooping; it is two inches, or more, in length, an inch and half in diameter, and of a pale green colour. The panicle often has eight pair of peduncles, each ſupporting ſeveral flowers.

This ſpecies is extreamly common in our meadows. Theophraſtus calls it, Poa. C. Bauhine, and others, Gramen pratenſe paniculatum majus latiore folio.

2. *Poa panicula diffuſa, angulis rectis, ſpiculis obtuſis, culmo obliquo compreſſo.* **Common Meadow Graſs.**

The diffuſe-panicled Poa, with an oblique, compreſſed ſtalk.

This is the moſt common of all the graſſes with us, and makes principally the green covering of moſt of our fields and meadows. It's root is compoſed of a multitude of long, ſlender fibres, which penetrate deep into the earth, and uſually grow together in vaſt tufts; from theſe ariſe leaves long, narrow, and of a beautiful green, in vaſt numbers. The ſtalks riſe among theſe, and are ſcarce erect, uſually oblique; they are ſix or eight inches long, of a whitiſh colour, round and jointed, and have ſhort, diffuſe panicles, of a whitiſh colour, on their extremities.

This ſpecies is called by Ray, Gramen pratenſe minus et vulgatiſſimum. C. Bauhine calls it, Gramen pratenſe paniculatum minus.

BRIZA.

THE calyx of the Briza is a bivalve glume, patent, and containing ſeveral flowers, which are arranged into a diſtichous ſpike, of a cordated figure. The two valves are cordated, hollow, and equal: the corolla is compoſed of two valves. The lower valve is of the ſize and ſhape of the cup: the upper valve is ſmall, plane, and roundiſh, and ſhuts up the hollow of the other. The ſtamina are three capillary filaments; the antheræ are oblong. The germen of the piſtil is roundiſh; the ſtyles are two; they are capillary and crooked: the ſtigmata are plumoſe. The corolla ſerves in the place of a pericarpium, incloſing the ſeed, and, when ripe, dropping it out. The ſeed is ſingle, very ſmall, roundiſh, and compreſſed.

This genus comprehends the Tremula of Scheukzer, and the Phalaroides of others.

1. *Briza ſpiculis ovatis, calyce floſculis breviore.* **Common Quaking Graſs.**

The Briza, with ſhort ſpiculæ, and the cup ſhorter than the flower.

The root of this ſpecies is compoſed of a few ſhort, greyiſh, or browniſh, fibres. From this riſes a cluſter of ten or twelve little leaves; they are three inches long, and moderately broad; among theſe riſes up ſometimes a ſingle ſtalk, but more uſually there are two, three, or more. The plant grows to eight or ten inches high; the ſtalk is round, and commonly has two joints; at each of theſe ſtands a ſingle leaf, which ſurrounds it, in manner of a vagina, for a long way at it's baſe, and from this grows looſe to the length of an inch or two, and is narrow, rigid, and pointed. The top of the ſtalk is furniſhed with a number of large and beautiful glumes, ſupported on long and extreamly ſlender peduncles, ſo that the leaſt breath of air ſets them a trembling. They are at firſt of a greeniſh, afterwards often of a browniſh-red, colour.

This ſpecies is common in our meadows and paſtures. C. Bauhine calls it, Gramen tremulum majus. J. Bauhine, Gramen tremulum. Moriſon, Gramen tremulum vulgare locuſtis rotundioribus.

This is the graſs, the piſtil of which is deſcribed in the Philoſophical Tranſactions, under the name of a plant in Semine. It's germen is called the bulbous root of the plant. The author of the paper is Mr Baker.

2. *Briza panicula ſpicata, ſpicis lanceolatis.* Love Graſs.
The ſpike-panicled Briza, with lanceolated ſpikes.

The root of this beautiful graſs is formed of a number of ſmall fibres, connected at the top into a kind of head: from this ariſe eight or ten leaves, which are four inches, or more, in length, and about a fifth of an inch broad, and of a whitiſh-green colour. In the midſt of theſe riſes the ſtalk; it grows to be a foot high, and is moderately thick, and uſually has two joints: at each joint is a leaf, the baſe of which makes a kind of vagina, ſurrounding the ſtalk, and from this part it grows looſe to an inch or two only in length, and is narrower than the radical leaves. At the top of the ſtalk ſtand a number of glumes, extreamly beautiful, three quarters of an inch long, and of a bright white colour. They reſemble the glumes of the common gramen tremulum in ſhape, but they are affixed to conſiderably ſtrong and rigid ſtalks, not ſuch tender ones as they are.

This ſpecies is not unfrequent in France, Germany, and Italy, but we have it not in England. C. Bauhine calls it, Gramen paniculis elegantiſſimis ſive eragroſtis major.

UNIOLA.

THE calyx of the Uniola contains ſeveral flowers, and is compoſed of ſix valves laid together in a diſtichous, imbricated manner. They are ſubulated, or nearly of that figure, compreſſed, navicular, and carinulated; one of them ſhuts the other, and the laſt pair contains a ſpike of an oval, ſomewhat compreſſed figure, with an acute edge, and containing ſeveral flowers. The corolla is a bivalve glume: the valves are of a lanceolato-compreſſed figure, like thoſe of the cup, and the inner valve appears ſomewhat higher than the outer one. The ſtamina are three capillary filaments: the antheræ are oblong and linear. The germen is conic; the ſtyles are two, erect and ſimple; the ſtigmata are hoary. The corolla performs the office of a pericarpium, incloſing the ſeed, which is ſingle, and of an ovated, oblong figure.

Of this genus there is but one known ſpecies; it is ſufficiently diſtinguiſhed by it's characters, and needs no farther deſcription. Plukenet has figured it, T. 32. f. 6.

CYNOSURUS.

THE calyx of the Cynoſurus is a partial involucrum, large, triphyllous, and lateral: the foliole pennated and permanent.

The glume is formed of two valves, and contains ſeveral flowers. The valves are equal, linear, and acuminated. The corolla conſiſts of two valves; the exterior is the longer, and is hollowed and ariſtated; the interior is ſhorter, plane, and has no ariſta. The ſtamina are three capillary filaments; the antheræ are oblong; the germen is turbinated; the ſtyles are two in number, villous and reflex; the ſtigmata are ſimple. The corolla ſerves the office of a perianthium, ſurrounding and covering the ſeed, which is ſingle, of an oblong figure, and pointed at each end.

1. *Cynoſurus bracteis pinnatifidis.* Creſted Graſs.
The Cynoſure, with pinnatifid bracteæ.

The root of this ſpecies conſiſts of a great number of ſlender, white fibres, collected into a head, and diſperſing themſelves every way into the earth. From this riſes a cluſter of ſmall leaves, not more than two or three inches long, and very narrow; in the midſt of theſe riſes a ſtalk of two feet high, very ſlender, and jointed; at every joint ſtands a leaf, which, after it has ſurrounded the ſtalk for ſome inches in form of a vagina, grows to two or three inches in length from it, and is very narrow and pointed. The ſtalk is terminated by a ſpike of flowers of a peculiar figure; it is formed of two ſeries of criſtated and fimbriated glumes, turning the ſame way; it is an inch and a half in length, and about a fifth of an inch in thickneſs; it's colour is a browniſh-green.

This ſpecies is frequent in our meadows and paſtures. C. Bauhine calls it, Gramen criſtatum ſive ſpica criſtata lævi. J. Bauhine, Gramen criſtatum. Parkinſon, Gramen criſtatum

criſtatum Anglicum. A variety of this is deſcribed by C. Bauhine, alſo, under the name of a different ſpecies, with a hairy ſpike.

2. *Cynoſurus ſpicis quaternis terminatricibus horizontalibus.* Cock's-Foot Graſs.
The Cynoſure with four horizontal, terminatory ſpikes.

The root of this ſpecies is white, creeping, and of a ſweet taſte: from this riſe, at two different ſeaſons of the year, two kinds of ſtalks and leaves. In the ſpring it produces a number of long, flexile, jointed ſtalks, which trail upon the ground, and take root at the knots; from theſe joints, oppoſite to the roots, there riſe cluſters of ſhort, hairy leaves, ſurrounding one another: in the ſummer it produces other ſtalks, which are erect, and grow to a foot high; theſe are ſlender, jointed, and have, at every joint, a ſingle leaf, ſurrounding the ſtalk at it's baſe, and afterwards hairy, but ſhort and narrow. The top of the ſtalk is terminated by a number of ſpikes, uſually four, ſometimes five or ſix; they are ſhort, narrow, and imbricated.

This ſpecies is extremely common in France, Italy, and Spain, but it is not a native of England. C. Bauhine calls it, Gramen dactylon folio arundinaceo majus.

3. *Cynoſurus panicula ſecunda glomerata.* Hard Meadow Graſs.
The glomerated-panicled Cynoſurus.

The root of this ſpecies is compoſed of a few thick, white fibres: from this riſe ſix or eight leaves, of a pale greyiſh-green, five inches long, a fifth of an inch broad, and very rough to the touch. Among theſe riſes a ſtalk, a foot and a half high, round, jointed, moderately thick, and furniſhed with a leaf at every joint, like the radical leaves, but ſhorter, very rough to the touch, and embracing the ſtalk at it's baſe, in form of a vagina. The top of the ſtalk ſupports a panicle, formed of three parts, conglomerated at top, and alſo harſh to the touch, an inch and a half long, and of a browniſh, or reddiſh, colour.

This ſpecies is very frequent in our meadows, and diſcovers itſelf to the touch by it's roughneſs. C. Bauhine calls it, Gramen ſpicatum folio aſpero; Læſelius, Gramen pratenſe ſpica compacta divulſa.

BROMUS.

THE calyx of the Bromus is a bivalve, patent glume, containing ſeveral flowers, collected into an oblong, oval ſpike. The valves are of an ovato-oblong figure, pointed, but without awns, and the under one is ſmaller than the other. The corolla conſiſts of two valves; the lower one is the larger; it is of the ſize and figure of the cup, hollow, obtuſe, and, below it's point, it emits a ſtrait ariſta; above the inſertion of this ariſta it is bifid: the upper valve is ſmall, of a lanceolated figure, and has no ariſta: the ſtamina are three capillary filaments, ſhorter than the flower: the antheræ are oblong: the germen of the piſtil is turbinated: the ſtyles are two; they are ſhort, reflex, and villoſe: the ſtigmata are ſimple: the corolla ſerves the office of a pericarpium; it ſhuts cloſe over the ſeed, and covers it every way. The ſeed is ſingle and oblong, convex on the one ſide, and hollowed on the other.

This genus comprehends the Feſtuca of Scheuchzer, and the Ægilops of Dillenius.

1. *Bromus panicula nutante, ſpiculis ovato-oblongis.* Tall Oat Graſs.
The bending-panicled Bromus, with ovato-oblong ſpikes.

The root of this ſpecies is compoſed of a great number of ſlender, white fibres, variouſly interwoven with one another. From this ariſe twenty or thirty leaves, each five or ſix inches long, and more than a quarter of an inch broad: they are of a pale green, and hairy at the edges. In the midſt of theſe is a ſtalk, and, as this grows up, the radical leaves wither: this ſtalk is, when full grown, two or three feet high, very ſlender, and jointed in five or ſix places; theſe joints have each a leaf, ſurrounding the ſtalk at it's baſe, and growing to four or five inches in length from it, ſomewhat broad, and pointed at the end. At the top ſtands a large, diffuſe panicle, the ſeveral parts of which hang on long, and very ſlender, filaments. C. Bauhine calls this, Feſtuca avenacea ſterilis elatior; J. Bauhine, Ægilops forte Matthioli.

2. *Bromus panicula diffusa, spiculis teretibus.* Bush Oat
The diffuse-panicled Bromus, with rounded spikes. Grass.

The root of this species is composed of a great number of white, and somewhat thick, fibres. From this rise eight or ten leaves, a foot, or more, in length, and about a third of an inch in breadth; these wither, soon after the stalk appears. The stalk grows to three feet, or more, in height, and has usually four joints, with a single leaf at each, surrounding them at the base, in the manner of the vagina: while they surround the stalk, they are striated, and hairy; afterwards, they are almost smooth, and grow to a foot in length. The top of the stalk is terminated by a a diffuse panicle, composed of small, rounded spikes, hung on very long pedicles. The leaves are of a pale yellowish-green, the panicle of a pale-brown. Ray calls this species, Gramen avenaceum dumetorum panicula sparsa; C. Bauhine, Festuca graminea latifolia mollis.

3. *Bromus paniculæ ramis conjugato-binatis.*
The Bromus, with conjugate-double branches in the panicle.

The root of this species is a tuft of white fibres: from this rise six or eight leaves, eight inches long, a third of an inch broad, and striated; among these rises the stalk: it grows to a foot and a half high, and has four or five joints, at each of which there stands a single leaf: this is a foot long, and more than a third of an inch broad; it surrounds the stalk at the base, and is not at all hairy. At the top of the stalk stands a lax panicle, composed of conjugate, little spikes, with very long and capillary aristæ.

This species is found about London. Ray calls it, Gramen avenaceum glabrum panicula e spicis raris, strigosis, composita, aristis tenuissimis.

FESTUCA.

THE calyx of the Festuca is a glume, containing several flowers. It is composed of two valves, and is erect, and the flowers are arranged in it in a slender spike: the valves are of an oblong linear figure, acuminated, and without awns; the lower valve is smaller than the upper: the corolla consists also of two valves; the lower valve is the larger, and of the shape of the cup, and somewhat exceeds it in size; it is of a kind of cylindric figure, but pointed at the end, and is terminated by a strait arista, or awn. The stamina are three capillary filaments, shorter than the flower. The antheræ are oblong; the germen of the pistil is turbinated: the styles are two in number, short and reflex: the stigmata are simple; the corolla serves in the place of a pericarpium, surrounding and inclosing the seed: the seed is single, of an oblong figure, very thin, very sharp-pointed at each end, and marked with a longitudinal furrow.

This genus comprehends the Festuca of Dillenius, and the Bromoides of Scheukzer; it is very nearly allied to the last; the terminatory arista is the great distinction.

1. *Festuca panicula spicata, nutante, calycibus minutissimis muticis, floribus scabris.* Capon's-Tail
The spike-panicled Festuca, with a bending head, and scabrous flowers. Grass.

The root of this species consists of a number of small, reddish fibres. From these arises a cluster of small leaves, two or three inches in length, very narrow, pointed at the ends, and usually of a reddish, or browniſh, colour: among these rise two or three stalks from each root; they are six or eight inches long, very slender, and jointed: at every joint stands a single leaf, surrounding the stalk at it's base, narrow, short, and pointed; on the top of every stalk there stands a panicle, in form of a spike, six inches long, not half an inch broad, and bending with it's own weight: this is of a green, or browniſh, colour.

The plant is common on old walls, and flowers in June and July. Ray calls it, Gramen murorum spica longissima; others, Gramen alectruonurus.

2. *Festuca*

2. Feſtuca panicula erecta, ſpiculis ſubovatis muticis, calyce floſculis majore. The erect-panicled Feſtuca, with ſubovate ſpikes, and the cups larger than the flowers.

The root of this ſpecies is compoſed of a few fibres: the leaves, which riſe immediately from it, are ſhort, ſomewhat broad, and hairy. The ſtalks are a foot long, often leſs; they are very weak, and do not ſtand erect, but uſually bend to the ground: they have three or four joints, and at each joint a ſingle ſhort leaf, incompaſſing the ſtalk at the baſe. At the top ſtands a ſmall panicle, formed of oval, turgid, little ſpikes, and thoſe ſupported on rigid, and not very long, pedicles, ſo that they ſtand firm and erect.

This ſpecies is very frequent, in our meadows and paſtures, in June. Ray calls it, Gramen avenaceum parvum, procumbens paniculis non ariſtatis; Scheuckzer, Gramen avenaceum montanum locuſtis muticis tumentibus piloſum.

3. Feſtuca ſpiculis viviparis. The Feſtuca with viviparous ſpikes. **Proliferous Dat Graſs.**

The root of this ſpecies conſiſts only of three or four ſhort white fibres; from this riſe ten or twelve leaves, very narrow, ſharp-pointed, and about four inches in length: among theſe there comes up a ſtalk, which grows to about ten inches high; it has three or four joints, and, at each, a ſhort, pointed leaf, ſurrounding the ſtalk at the baſe; at the top ſtands a ſhort panicle, ſlender, and reſembling a ſpike. It is about an inch and a half long, a third of an inch in diameter, and, before the ſeeds are ripe in it, there grow blades of graſs, or young plants, from almoſt every flower.

This is frequent on the Welch mountains; I alſo found it in Mr Apreece's park at Waſhingley. Ray calls it, Gramen ſpicatum montanum, ſpica foliacea graminea; Scheuckzer, Gramen ſparteum Alpinum, panicula ſpadiceo viridi uno plerumque verſu diſpoſita.

AVENA.

THE calyx of the Avena is a glume, compoſed of two valves, and containing ſeveral flowers, arranged laxly together; the valves are lanceolated, acute, and bellied, large, and without awns. The corolla conſiſts of two valves; the lower valve is of the ſize of the cup, and harder, rounded, bellied, and pointed at each extremity; and, from it's back, there grows a ſingle, crooked, and, as it were, jointed, contorted, ariſta or awn. The nectaria are two; they are of an ovated, lanceolate figure, and grow on the upper ſide of the germen. The ſtamina are three capillary filaments: the antheræ are oblong and bifurcated: the germen of the piſtil is obtuſe: the ſtyles are two, reflex and hairy: the ſtigmata are ſimple: the corolla ſerves in the office of a pericarpium, ſurrounding and incloſing the ſeed, which is ſingle, of an oblong figure, very ſharp-pointed at each end, and has a longitudinal furrow.

The flowers in the cup are ſometimes two, ſometimes more, and there is one ſpecies whoſe calyx conſiſts of a ſingle valve. The ariſta at the back of the corolla, which is jointed and intorted, conſtitutes the eſſential character.

This genus comprehends the Avena of Tournefort, &c. and the Avenacea of Scheuckzer, &c.

1. *Avena calycibus diſpermis, ſeminibus lævibus. The Oat, with two ſmooth ſeeds in each calyx.* **Common Oat.**

The root of this ſpecies conſiſts of a great number of fibres. The ſtalks are round, and four feet high; they have each four or five joints, and have a graſſy leaf or two at the baſe: at every joint there ſtands a ſingle leaf, long and narrow, and forming a vagina round the ſtalk at it's bottom. At the top of the ſtalk ſtands a panicle, ſomewhat like that of the common reed, the flowers ſtanding on long pedicles.

This ſpecies is ſown in fields. C. Bauhine calls it, Avena vulgaris; J. Bauhine, Avena alba: theſe, and ſome other authors, erroneouſly make another ſpecies, from a variety of this, which they call, Avena nigra.

2. *Avena panicula laxa, calycibus triflori brevibus, floribus omnibus ariſtatis.*
The lax-panicled Oat, with three flowers in a cup, all of them criſtated.

The root of this ſpecies conſiſts of a few fibres: the ſtalk riſes to two feet in height, and is ſlender, geniculated, and ſomewhat hairy. The leaves are narrow, five or ſix inches long, and hairy on both ſides. The top of the ſtalk ſupports a ſhort panicle, of a yellowiſh colour, diffuſe, but not bending, it's ſeveral parts being ſupported on very rigid and firm pedicles.

It is common, in our meadows and paſtures, in June. Ray calls it, Gramen avenaceum pratenſe elatius, panicula flaveſcente locuſtis parvis.

3. *Avena calycibus bifloris, floſculo hermaphrodito mutico, maſculo ariſtato.*
The Avena with two flowers in the calyx, and with ariſtated male flowers, and naked hermaphrodite ones.

The root of this ſpecies conſiſts of a long ſeries or ſtring of bulbs, or tuberous bodies, laid one over another, and furniſhed with a great number of fibres; the taſte is ſlightly acid: from this ariſe ten or twelve leaves, moderately broad, but not hairy, though rough, if the hand be drawn from the point toward the baſe. The ſtalk riſes to three feet, or more, in height, and has four or five joints, at each of which there ſtands a ſingle leaf, which forms a vagina round it, reaching almoſt up to the next joint; when it ſeparates from this, it is four inches long, and very broad. The top of the ſtalk ſupports a panicle ſix inches long, and diffuſe: the pedicles which ſupport it are ſlender, and the ſpiculæ are often nutant, often all turned to one ſide. The glumes are very beautiful, of a mixt purpliſh and ſilvery white.

We have this ſpecies among corn, and in our fields and hedges. C. Bauhine calls it, Gramen nodoſum avenacea panicula; J. Bauhine, Gramen nodoſum; Gerard, Gramen caninum nodoſum.

ARUNDO.

THE calyx of the Arundo is a glume, formed of two oblong, acuminated valves, not ariſtated, one longer than the other; it is erect, and contains, in ſome ſpecies, one; in others, ſeveral flowers. The corolla is formed of two valves; they are of the length of the cup, of an oblong, acuminated figure, and have, at their baſe, a lanuginous matter, of the length of the flower. The ſtamina are three capillary filaments: the antheræ are bifurcated at each end: the germen of the piſtil is oblong: the ſtyles are two; they are capillary, reflex, and hairy: the ſtigmata are ſimple: the corolla adheres to the ſeed, and ſerves as a pericarpium: the ſeed is ſingle, oblong, pointed, and downy at the baſe.

1. *Arundo panicula laxa, floſculis quinis.* **Common Reed.**
The lax-panicled Reed, with five flowers in a cup.

The root of this ſpecies is creeping; it is long, thick, contorted, and knotty, of a whitiſh colour, with ſome caſt of red; it is very hard and woody, and ſpreads a long way under the ground: it's young ſhoots are ſweet and eſculent. The ſtalk is ſix or ſeven feet high, of the thickneſs of a man's little finger, jointed and hollow: from every joint of the ſtalk grows a ſingle leaf, which ſurrounds it at it's baſe, and grows from it to a foot, or more, in length, and is ſtriated, about two inches in breadth, and rigid to the touch. At the top of the ſtalk ſtands a beautiful, large, diffuſe, purpliſh panicle, which, by degrees, becomes more and more pappoſe, or downy, and of a paler colour, and finally is of a greyiſh-brown. It is compoſed of a multitude of parts, and thoſe affixed to ſlender pedicles, ſo that it plays about in a beautiful manner in the wind.

This ſpecies is common about ponds, ditches, and rivers. Authors call it, Arundo vulgaris, Arundo vallatoria, and Phragmites.

2. *Arundo culmo ramoso.*
The branched-ſtalked Arundo.

The root of this ſpecies is compoſed of a great number of ſhort, but thick, fibres: from this riſe ten or twelve leaves, hard and rigid to the touch, five or ſix inches long, and ſtriated, narrow, and terminating in a ſharp point. In the midſt of theſe riſes a ſtalk, two feet, or more, in height, firm, rigid, and dry; it has about three joints, and at each a leaf, like the radical ones, but ſurrounding the ſtalk a great way at it's baſe. At the top ſtands a panicle, large, diffuſe, and compoſed of long ſpikes, of a purpliſh colour at firſt, but growing downy, white, and ſhining, as they ripen.

This ſpecies is not frequent in England; I met with it, however, in the borders of ſome corn-fields about Waſhingley. C. Bauhine calls it, Gramen arundinaceum panicula ſpadicea molli majus; others, Gramen tomentoſum.

3. *Arundo foliorum lateribus convolutis, acumine pungente.*
The rounded-leaved Arundo, with pungent points.

The root of this ſpecies conſiſts of a cluſter of fibres: from this riſe ten or a dozen leaves, a foot and a half in length, and about a third of an inch in breadth at firſt, but their ſides ſoon curl in, and render them very narrow and rounded, but ſharp at the end. Among theſe riſes a ſtalk, ſcarce ſo high as the leaves, and compoſed of two or three joints; at every joint ſtands a leaf, like thoſe at the root, but ſhorter, and ſurrounding the ſtalk a little at the baſe. At the top ſtands a panicle, four inches long, and not half an inch wide, reſembling a ſpike; it is ſmalleſt at the ends, and ſomewhat thickeſt in the middle.

This ſpecies is common on our ſea-coaſts, where it's leaves prick people's legs, and will fetch blood. C. Bauhine calls it, Gramen ſparteum ſpicatum foliis mucronatis longioribus; and Scheukzer, Gramen ſparteum ſpicatum maritimum ſpica longiore.

LOLIUM.

THE calyx of the Lolium is a glume, containing ſeveral flowers, and conſiſting of a ſingle valve, oblong, linear, acuminated, ſomewhat rigid, and containing the flowers, arranged in diſtichous ſpikes, placed cloſe to the ſtalks. The corolla conſiſts of two valves; the lower is narrow, lanceolated, convoluted, acuminated, and of the length of the cup; the other is ſhort, linear, obtuſe, and hollowed upwards. The ſtamina are three capillary filaments, ſhorter than the flower: the antheræ are oblong: the germen of the piſtil is turbinated: the ſtyles are two, capillary and reflex: the ſtigmata are plumoſe: there is no pericarpium. The corolla incloſes the ſeed, which is ſingle, oblong, compreſſed, convex on one ſide, and plane and ſulcated in the middle on the other.

This genus comprehends the Lolium and Loliacea of Scheuckzer and others. The ſpikes are always ſeſſile, and placed in the ſame plane with the ſtalk, ſo that the ſtalk itſelf performs the office of the oppoſite and deficient valve of the glume.

1. *Lolium ſpicis ariſtatis, radice annua.* White Darnel.
The ariſtated-ſpiked Lolium, with an annual root.

The root of this ſpecies conſiſts of a multitude of fibres, with numerous capillaments iſſuing from them. From this riſes a cluſter of leaves, conſiderably long, narrow, and of a ſhining green colour, ſomewhat thick and ſharp at the points: among theſe riſes the ſtalk, which is two or three feet high, much reſembling the ſtalk of wheat, but that it is thinner: it has four or five joints, and, at every joint, a leaf, like thoſe at the bottom, but ſmaller and ſhorter; theſe ſurround the ſtalk from the joint they ariſe at, almoſt to the next, and terminate in a point. The ſtalk terminates in a ſpike of a foot in length, though but very narrow and flat, formed of alternate glumes, on the two oppoſite ſides of the ſtalk.

This ſpecies is very common in our corn-fields. C. Bauhine calls it, Gramen loliaceum ſpica longiore; others, Lolium vulgare, and Lolium album.

2. *Lolium*

2. *Lolium ſpicis muticis, radice perenni.* Red Dar-
The naked-ſpiked Darnel, with a perennial root. nel.

The root of this ſpecies is long and creeping, of the thickneſs of a crow-quill, and jointed, ſending out many fibres from the joints: from the oppoſite ſide of theſe joints ariſe alſo cluſters of leaves, five or ſix inches long, very narrow, of a deep green colour, thick and flattiſh; among theſe riſes a ſtalk round, jointed, and a foot, or more, in height: from the lower joints of this there alſo frequently ariſe other ſecondary ſtalks. At every joint of theſe ſtands a ſingle leaf, ſurrounding the ſtalk at the bottom, very like the radical leaves, but narrower and ſhorter: at the top ſtands a thin, flat ſpike, four or five inches long, and uſually of a reddiſh colour, and compoſed of alternate glumes.

This ſpecies is common by way-ſides. C. Bauhine calls it, Gramen loliaceum anguſtiore folio et ſpica; others, Lolium rubrum.

TRITICUM.

THE calyx of the Triticum is a glume compoſed of two valves, and uſually containing three flowers: the valves are of an ovated figure, and obtuſe. The corolla conſiſts of two valves, nearly equal in ſize, and of the bigneſs of thoſe of the cup. The exterior valve is bellied with an obtuſe end, terminated by a point; the interior valve is plane. The ſtamina are three capillary filaments; the antheræ are oblong, and bifurcated: the germen of the piſtil is turbinated: the ſtyles are two; they are capillary and reflex; the ſtigmata are plumoſe. The corolla ſerves in the place of the pericarpium, incloſing the ſeed, which is ſingle, oblong, obtuſe, and furrowed on one ſide.

This genus comprehends the Triticum and the Triticea of Scheuckzer, Pontedera, &c.

1. *Triticum radice annua, glumis ventricoſis, lævibus, imbricatis, ſubmuticis.*
The annual, bellied-glumed Triticum, with imbricated glumes without awns. Wheat.

The root of this ſpecies conſiſts of a great number of fibres, ſlender, but moderately long; from this ariſe firſt a number of long, narrow, and thin leaves, of a pale green; afterwards ſeveral ſtalks, which are tall, large, hollow, and jointed. At every joint ſtands a ſingle leaf, which ſurrounds the ſtalk a long way, and, when it leaves it, is like the radical leaves. At the top ſtands a long and thick ſpike, ſurrounded with ſhort and ſcarce ſenſible ariſtæ or awns. The ſeeds are ſometimes white, ſometimes reddiſh, and are much larger or ſmaller, according to the culture and nature of the ſoil.

This is ſown every-where in our fields, and is properly a biennial plant. C. Bauhine calls it, Triticum biennium ariſtis carens. Lobel, Siligo ſpica mutica. Starch is principally made from this wheat.

2. *Triticum calycibus truncatis quadrifloris, floſculis ariſtatis hermaphroditis, intermedio neutro.* Spelt
The truncated cup four-flowered Triticum, with various flowers. Corn.

This plant, in it's general appearance, much reſembles the common wheat. It's root conſiſts of a cluſter of moderately thick, and not very long, fibres; from this ariſe firſt a number of long and narrow leaves, very thin, and of a pale green; among theſe afterwards riſe ſeveral ſtalks, hollow, jointed, ſlender, and about three feet high. At every joint ſtands a leaf, which ſurrounds the ſtalk, for a great way, at the baſe, and, after it leaves it, grows to five or ſix inches in length; at the top of the ſtalk ſtands a ſpike, five or ſix inches long, and ſomewhat compreſſed. The valves of the corolla ſtick ſo cloſe about the ſeed, that they are very difficultly ſeparated; but, when the ſeed is cleared from them, it is ſcarce diſtinguiſhable from wheat.

This ſpecies is cultivated in fields in ſome places, and is a biennial. C. Bauhine calls it, Zea dicoccos ſive Zea major, others, Spelta.

3. *Triticum*

3. *Triticum radice repente foliis viridibus.* **Couch Grass.**
The green-leaved Triticum, with a creeping root.

The root of this ſpecies is compoſed of ſeveral long ramifications, of the thickneſs of a crow-quill, white and ſweet to the taſte. Theſe ſpread ſeveral ways under the ſurface of the ground, and terminate in ſharp, hard, and pungent ſhoots. From the ſeveral parts of this root ariſe cluſters of leaves; they are long, narrow, and of a pale green; among theſe riſe the ſtalks; they grow to three or four feet high, and have each four or five joints: at every joint ſtands a ſingle leaf, which ſurrounds the ſtalk almoſt to the next joint, and, when it ſeparates from it, grows to ſix or eight inches in length, and generally droops downward. At the top of the ſtalk ſtands a ſpike like that of wheat, but much thinner, reddiſh in colour, and ſurrounded with a ſet of ſhort awns.

This ſpecies is frequent in our fields, and under hedges. It's root is the graſs-root uſed in medicine; it is diuretic and attenuant. C. Bauhine calls the plant, Gramen caninum arvenſe ſive gramen Dioſcoridis; others, Gramen caninum.

SECALE.

THE calyx of the Secale is an involucrum, compoſed of two leaves, and containing two flowers. The leaves ſtand oppoſite, and are erect, linear, and acuminated, and are ſmaller than the corolla: the corolla conſiſts of two valves: the exterior valve is rigid, ventricoſe, acuminated, and compreſſed; it's lower edge is ciliated, and it terminates in a long ariſta: the interior valve is lanceolated and plane. The nectaria are two in number; they are ovated and erect: the ſtamina are three capillary filaments, hanging out of the flower: the antheræ are oblong and furcated. The germen of the piſtil is turbinated: the ſtyles are two, reflex and villoſe; the ſtigmata are ſimple. The corolla ſerves the office of a pericarpium, incloſing the ſeed, and, at a proper time, opening and dropping it out. The ſeed is ſingle, oblong, and almoſt cylindric in figure.

This genus comprehends the Secale and the Secalina of Scheuckzer, &c. In ſome ſpecies the flowers are all hermaphroditic; in others there are ſome of them only males: and often there are two ſeſſile flowers, with a third fixed on a pedicle between them.

1. *Secale glumarum ciliis ſcabris.* **Rye.**
The Secale, with rough ciliæ.

The root of this ſpecies conſiſts of a cluſter of fibres, long, ſlender, and variouſly implicated, and interwoven with one another; from theſe riſe a number of long, narrow, and pointed leaves, thin and reddiſh at their firſt appearance, but afterwards green, and longer and narrower than thoſe of wheat. Among theſe there riſe ſeveral ſtalks, ſeldom leſs than ſix or ſeven from the ſame root, often many more. Theſe riſe to five feet high; they are thinner than thoſe of wheat, but more rigid and firm. They riſe out of a gramineous vagina, and have each four or five joints, and at every joint a ſingle, long, and narrow leaf, ſurrounding the ſtalk a long way at the baſe, and growing to ſome length from it: the ſpike is long, and moderately thick, and has ſhort but rigid awns. The ſeed is longer and thinner than wheat, and of a blackiſh colour.

This ſpecies is ſown in our fields. C. Bauhine calls it, Secale hybernum, and Secale vernum, from the different times of ſowing it; and adds, majus to the former, and minus to the latter; but they are not diſtinct ſpecies.

2. *Secale ſpiculis geminatis.* **Sea Dog's Grass.**
The double-ſpiked Secale.

The root of this ſpecies is compoſed of ſeveral ramifications, of the thickneſs of a crow-quill, and of a foot, or more, in length, which creep in various directions under the ſurface: from theſe, in ſeveral parts, ariſe tufts of leaves, thirty, or more, together:

together: these are six or eight inches long, a third of an inch broad, and of a bluish green colour, while fresh; but, as they begin to decay and dry up, their edges turn in, and they grow roundish, and of a whitish colour; and this is the state they are most frequently seen in: amongst these rises the stalk, which is slender, and grows to two or three feet high. It is firm and rigid, and has about four joints, at each of which stands a single leaf like the radical ones, and surrounding the stalk to some distance at the base. At the top of the stalk stands a spike or ear, very like that of wheat, but not so thick, though equal to it in length.

This species is common about the sea-shores in England. Ray calls it, Gramen caninum maritimum spica triticea. Tournefort, Gramen loliaceum radice repente maritimum; and Van Royen, Triticum foliis acuminatis pungentibus.

HORDEUM.

THE calyx of the Hordeum is a partial involucrum, composed of six leaves, and containing three flowers: the leaves are erect, linear, acuminated, and two of them are placed under every flower; there is no glume. The corolla consists of two valves; the inferior valve is angular, of an ovato-acuminated figure, bellied, and longer than the cup, and terminates in a very long arista: the interior valve is lanceolated, plane, and smaller. The stamina are three capillary filaments, shorter than the flower: the antheræ are oblong: the germen of the pistil is of a turbinated, oval figure: the styles are two in number, and are reflex and hairy; the stigmata are similar. The corolla serves as a pericarpium, surrounding the seed, and not letting it out. The seed is oblong, ventricose, angulated, pointed at each end, and marked with a longitudinal furrow.

This genus comprehends the Hordeum and the Gramen secalinum of Ray.

In some of the species all the three flowers, contained in the common cup, are hermaphrodite and fertile; in others the two lateral flowers are only males, and the intermediate one hermaphrodite.

1. *Hordeum flosculis lateralibus masculis, muticis, angularibus imbricatis.* **Barley.**

The Hordeum, with the lateral flowers male and naked, the angular ones imbricated.

The root of this species is composed of a cluster of small, white, and long fibres; from this rise ten or twelve leaves, long, narrow, of a pale green, and very thin, very like those of wheat, but somewhat narrower; among these rise the stalks: they grow to two feet, or more, in height, but not nearly so high as those of wheat: they are hollow, but very firm, and have usually about six joints; at each joint stands a single leaf, which is nearly as broad as the wheat-leaf, and at the bottom surrounds the stalk to some distance from the joint. At the top stands a spike or ear, about four inches long, and half an inch thick, and every way surrounded with very long aristæ or awns.

This species is sown in our fields. C. Bauhine calls it, Hordeum distichum; and most other writers use the same name.

2. *Hordeum flosculis lateralibus masculis, aristatis.* **Rye Grass.**

The Hordeum, with the lateral flowers, male and aristated.

The root of this species is composed of a great number of slender, white fibres, variously interwoven with one another. From this rise several oblong, grassy leaves; they are four or five inches long, a third of an inch broad, and pointed at the end; of a pale green colour, and somewhat rigid to the touch. Among these rises the stalk; it seldom exceeds five or six inches in height, and is often oblique, rather than erect: it has three or four joints, and at each a single leaf, surrounding it almost to the next joint. At it's top stands a long spike or ear, very much resembling an ear of barley, and furnished with aristæ as long and frequent.

This species is very frequent by way-sides, and in barren places, often on walls. It was long called barley-grass; of late it has been called rye-grass, but Linnæus has properly

perly referred it to the barleys again. C. Bauhine calls it, Gramen Hordeaceum minus et vulgare. Ray, Gramen ſecalinum et ſecale ſylveſtre.

ELYMUS.

THE calyx is a common involucrum, containing ſeveral flowers in two ſpiculæ, placed near one another on the ſame denticle of the ſpike. It conſiſts of four leaves, which are erect, acute, and narrow. The corolla is compoſed of two valves: the ſtamina are three ſhort and ſlender filaments; the antheræ are oblong. The germen is oval; the ſtyles are two, and their ſtigmata ſimple. The ſeed is oblong.

1. *Elymus ſpica flaccido-pendula.*

The Elymus, with a flaccido-pendulous ſpike.

The root of this ſpecies is compoſed of a cluſter of moderately thick fibres; from this ariſe eight or ten leaves; they are ten inches long, and more than half an inch broad, of a pale green colour, ſtriated and rough to the touch, both on the upper and under ſurfaces, if the hand be drawn backward over them. Among theſe riſe ſeveral ſtalks; they are hollow, jointed, round, and grow to two or three feet in height; at each joint ſtands a ſingle leaf, ſurrounding the ſtalk a great way at the baſe, in form of a vagina; and, when it ſeparates from it, of the form of the radical leaves. At the top of the ſtalk ſtands a ſpike of ſix or ſeven inches long, and of a lax ſtructure, not erect, but bending; the ſtalk itſelf between the ſpiculæ being compreſſed and very thin, and thence too feeble to ſupport itſelf upright. It is compoſed of two rows of theſe little ſpikes, and furniſhed with very long ariſtæ.

This ſpecies is a native of Siberia. Gmelin calls it, Triticum radice perenni ſpiculis binis longiſſime ariſtatis.

2. *Elymus ariſtis ſpicula longioribus, involucris magnis.*

The Elymus, with very large involucra, and with ariſtæ longer than the ſpiculæ.

The root of this ſpecies is compoſed of a number of oblong ramifications, creeping under the ſurface of the earth. From the ſeveral joints of theſe ariſe cluſters of leaves ſix or eight inches long, not very broad, and terminating in a point. Among theſe riſes a ſtalk a foot, or more, in height, round, jointed, of a pale green colour, and hollow. At every joint of this ſtands a leaf, ſurrounding it at the baſe, and growing to a conſiderable length from it: at the top ſtands a ſpike, three inches in length, and moderately thick, compoſed of a double ſeries of ſhort ſpiculæ; the flowers are ſmall, the involucra larger and thicker, and the whole ſpike covered with ariſtæ or awns.

This ſpecies is a native of Virginia, and many other parts of North America, and is called by Gronovius, Hordeum floſculis omnibus hermaphroditis, involucris floſculos craſſitie et longitudine ſuperantibus.

Claſs the Third. Order the Third.

TRIANDRIA TRIGYNIA.

Plants which have in every flower three ſtamina, and three ſtyles.

ERIOCAULON.

THE calyx of the Eriocaulon is a common perianthium, of a globoſe, depreſſed form; imbricated, and formed of permanent ſquammæ, of an equal ſize, and lanceolated ſhape. The general corolla is uniform and convex: the proper corolla is formed of three petals of a lanceolated figure, obtuſe, hairy at the top, and ſmall at the baſe, where they coaleſce and form a hairy ſtyliform body. The ſtamina are three capillary filaments growing on the germen: the antheræ are oblong and verſatile. The germen is ſlender, and placed within the corolla, under the ſtamina. The ſtyles are three

three in number, ſhort and capillary: the ſtigmata are ſimple. There is no pericarpium. The calyx remains unaltered, and contains the ſeed, which is ſingle.

Of this there is only one known ſpecies.

ERIOCAULON.

The root is fibrous; the radical leaves are two or three inches long, very narrow and graſſy of a pale green colour, and ſpread circularly on the ground. The ſtalks are very ſlender, round, naked, ſix or eight inches high, and are covered with a blackiſh, gloſſy hairineſs: on their tops ſtand ſmall, round, or oval, cluſters of whitiſh or reddiſh flowers.

It is a native of North America, and grows principally about the ſea-ſide. Petiver calls it, Planta marina capitulis albis conglobatis.

MONTIA.

THE calyx of the Montia is a perianthium compoſed of two leaves, concave, of an oval, obtuſe figure, erect and permanent. The corolla conſiſts of a ſingle petal, and is divided at the extremity into five parts; three of the ſegments are ſmaller than the others, and produce ſtamina; theſe ſtand alternately with the two larger. The ſtamina are three capillary filaments, of the length of the corolla, into which they are inſerted. The antheræ are ſmall: the germen of the piſtil is turbinated. The ſtyles are three in number, villoſe and patent: the ſtigmata are ſimple. The fruit is a turbinated, obtuſe capſule, covered by the cup, compoſed of three valves, and having three cells. The ſeeds are three in number, and roundiſh. This genus comprehends the Cameraria of Dillenius, and the Alſinoides of Vaillant. The calyx often varies, and is compoſed of three leaves; and in this caſe the flower has five ſtamina.

Of this genus there is only one known ſpecies. Micheli makes two, but erroneouſly, from a variety of this.

MONTIA. Blinks.

The root of this plant conſiſts of a great number of fine, capillary, white fibres; from this riſe ſeveral ſtalks, round, of a reddiſh colour, procumbent, and often ſending forth new roots at the joints, as they lie on the ground. They are often not an inch long, ſeldom much more than two, knotty, and often much branched. The leaves ſtand two at each joint; they are ſmall, like thoſe of the ſerpyllum, but narrower, of a pale green, and ſomewhat fattiſh. The flowers grow from the alæ of the leaves principally about the top of the plant, ſometimes all the way along it: they ſtand on peduncles half an inch in length, though ſometimes ſingly, ſometimes two or three together. They are extreamly ſmall, and ſeldom quite open; they are white. The taſte of the whole plant is bitter.

It is frequent with us in damp places; ſometimes, in rainy ſeaſons, in corn-fields. C. Bauhine calls it, Portulaca arvenſis. Dillenius, Cameraria arvenſis minor. Vaillant, Alſinoides annua verna; and Ray, Alſine parva paluſtris, tricoccos, portulacæ aquaticæ ſimilis.

PROSERPINACA.

THE calyx is a perianthium, compoſed of a ſingle leaf, divided at the extremities into three narrow, pointed ſegments. There is no corolla. The ſtamina are three ſlender filaments: the antheræ are moderately large, and oblong; the germen is oval, and ſtands beneath the cup; the ſtyles are three, and ſlender; the ſtigmata are ſmall; the ſeed is ſingle.

There is but one known ſpecies of this genus, and that ſo ſufficiently diſtinguiſhed by theſe characters, that it needs no farther deſcription.

TILLÆA.

TILLÆA.

THE calyx of the Tillæa is a plain perianthium, conſiſting of a ſingle leaf, divided into three large, oval ſegments. The corolla conſiſts of three oval, acute, plane petals, ſomewhat ſmaller than the ſegments of the cup. The ſtamina are three ſimple filaments, ſhorter than the corolla: the antheræ are ſmall. The germina of the piſtil are three in number: the ſtyles are ſimple; the ſtigmata are obtuſe. The fruit conſiſts of three oblong, acuminated capſules, reflex, and of the length of the flower, which, when ripe, ſplit open longitudinally upwards. The ſeeds are of an oval figure, and are contained two in each capſule.

Micheli firſt diſtinguiſhed this plant to be a diſtinct genus. There is only one ſpecies of it, and that Vaillant calls a ſpecies of Sedum.

TILLÆA.

The root is ſmall, white, woody, and divaricated into two or three parts. The radical leaves are of an oval figure, and about a tenth of an inch long, ſomewhat thick, and of a duſky green: the ſtalk is about an inch and half in length, round, ſlender, and furniſhed with a number of leaves, ſtanding in pairs, of the ſhape of the radical ones, but ſmaller, and without any pedicles. Sometimes the ſtalk is ſimple; ſometimes there grow branches from the alæ of all the leaves. The flowers are very minute; the ſeeds oval.

It grows out of the cracks of rocks in Italy and Spain. Bocconi calls it, Sempervivum, omnium minimum, repens, muſcoſum polygoni facie; and, in another place, Polygonum muſcoſum minimum.

MOLLUGO.

THE calyx of the Mollugo is a perianthium, compoſed of five leaves, which are permanent, oblong, coloured on the inſide, and erecto-patulous in their ſituation. There is no corolla, except the calyx be called by that name. The ſtamina are three ſetaceous filaments, ſhorter than the flower, and placed very near the piſtil: the antheræ are ſimple. The germen of the piſtil is oval and triſulcated: the ſtyles are three in number, and very ſhort: the ſtigmata are obtuſe. The fruit is a capſule of a ſomewhat oval figure, formed of three valves, and containing three cells, in each of which there are a number of kidney-ſhaped ſeeds.

There is only one known plant of this genus, and that is called, in the Hort. Lugd. Batavus, a ſpecies of Alſine.

MOLLUGO.

The root of this plant conſiſts of a number of white, moderately thick, and long fibres. The ſtalk is ſlender and round; it lies cloſe upon the ground, and is divided into a multitude of branches, in a dichotomous order. It is jointed, and between the joints ſomewhat ſtriated; and at the joints is larger than elſewhere, and of a red colour. At every joint of the ſtalk there ſtands a cluſter of leaves, uſually five, ſometimes ſeven. They are diſpoſed in a radiated manner, and are of a lanceolate figure, ſomewhat cruciform, and pointed at the extremities, and are ſmooth and hollowed. The flowers ſtand in circles round the ſtalk, each on it's own pedicle, which are ſhorter than thoſe of the leaves, and very ſlender. The calyx is oblong, green on the outſide, and within. The ſeeds are ſtriated, and of a reddiſh-brown colour.

This plant is a native of Virginia, and ſome other parts of North America. Gronovius calls it, Mollugo foliis ſæpius ſeptenis lanceolatis. Plukenet, Alſine ſpergula marina latiori folio, floribus ad nodos pediculis curtis circa caulem inſidentibus, calycibus punctatis.

Class the Fourth.

TETRANDRIA.

Plants which have in every flower four stamina.

OF the Tetrandria, some have only one style in the flower, some two, and some four. They are therefore conveniently arranged into three orders: the first containing those which have four stamina, and only a single style, under the name of Tetrandria Monogynia. The second, those which have four stamina, and two styles, under the name of Tetrandria Digynia; and the third, those which have four stamina, and four styles, under that of Tetrandria Tetragynia.

Class the First. Order the First.

TERANDRIA MONOGYNIA.

Plants which have four stamina, and only one style, in every flower.

THIS order contains so great a number of genera, that it is necessary to arrange them, according to their several principal and more obvious differences, into five divisions. The *first*, containing those which have several flowers in the same common calyx, and have naked seeds. The *second*, such as have monopetalous flowers, placed on didymous fruit, with a bifid style. The *third*, those which have monopetalous flowers, without these characters. The *fourth*, those which have compleat tetrapetalous flowers. The *fifth*, those which have incompleat tetrapetalous flowers.

Class the First. Order the First.

Division the First.

Tetrandria Monogynia, which have aggregated flowers in the same common cup, and have after every flower a single, naked seed.

LEUCODENDRON.

THE calyx of the Leucodendron is a common perianthium, of an imbricated figure, composed of unequal, permanent squammæ, very various in their figure and proportion. The general corolla is uniform and convex: the peculiar corolla is oblong, hoary on the outside, and is composed of two petals. The upper petal has a long, linear unguis, and it's limb is lanceolated, undivided, and in it's lower part is firmly joined to the lower petal: the lower petal has also a long unguis, of a linear figure, but three times as broad as that of the upper petal. The limb is oblong, of a semicylindric figure, and is divided into three segments. The stamina are four very short filaments, of a subulated figure; they are inserted into the limb of the corolla, one between every segment. The anthera seems single, and is erect and tubulated, of an oblong figure; it consists of four proper antheræ, which coalesce into a kind of cylindric body. The germen of the pistil is oblong, and terminates in a very long, subulated style: the stigma is simple; there is no pericarpium. The cup, scarce at all altered, serves in the place of it, containing in it's cavity a single, roundish seed, coronated with hairs. The receptacle is sometimes naked, and sometimes hairy, and there is one species, otherwise truly of this genus, in which the calyx is not a common one, but contains only a single flower.

This genus comprehends the Lepidocarpodendron, the Hypophyllocarpodendron, and the Conocarpodendron of Boerhaave; though not all the species of the last; also the Scolymocephalus of others.

1. *Leucodendron foliis oblongis, latis, obtuſis.*
The oblong, broad, and obtuſe-leaved Leucodendron.

This is a large and tall tree. It's root is very long, thick, and branched: it's trunk grows to three feet in diameter: the wood is very hard and knotty, and of a fine yellow colour: the bark is rough, and full of cracks; it is of a browniſh colour, with ſome tinge of yellow on the trunk, but, on the young branches, it is of a fine ſtrong purple. The branches are very numerous, and the leaves ſtand very thick on them, in an irregular manner; they are like thoſe of ſome of our willows, oblong, broad, obtuſe, of a pale green, and ſomewhat thick and fleſhy: the middle rib is yellow, and there is uſually a border of purple all round the edge: at the extremities of the branches ſtand the flowers. The cup is very large, and conſiſts often of eight ſucceſſive ſeries of ſquammæ; theſe are purple on the outſide, and of a greyiſh-yellow within: the flowers are very numerous, but ſmall in proportion to the ſize of the cup. The tree grows to twenty or thirty feet high, and, when in flower, is one of the moſt beautiful trees in the world.

It is a native of the Cape of Good Hope. It's bark is an aſtringent, and is uſed with ſucceſs by the Africans againſt diarrhœas. Herman calls it, Scolymocephalus foliis oblongis, glabris, craſſioribus, latioribus. Boerhaave, Lepidocarpodendron folio ſaligno lato, caule purpuraſcente.

2. *Leucodendron foliis apice trifido, glabris.*
The ſmooth, trifid-leaved Leucodendron.

This is a very beautiful ſpecies, as well as the former, but it does not grow to ſuch a ſtature. It's root is large, woody, and branched: from this riſe a number of woody ſhoots, which grow to three or four feet high, rarely more: the bark is of a duſky brown, ſmooth and gloſſy; the wood hard, and of a whitiſh colour. The leaves ſtand irregularly, and have no pedicles; they ſtand at diſtances from one another, and are ſmall, narrow, and divided into three parts at the extremity; the lower ones have only this trifid top of the leaf red; the reſt are red throughout, and make a very beautiful appearance. The flowers grow at the extremities of the branches, affixed to theſe red leaves, and make a very beautiful appearance.

This is alſo a native of the Cape of Good Hope. Boerhaave calls it, Hypophyllocarpodendron foliis inferioribus apice trifido rubro, ſuperioribus penitus rubris glabris; Herman, Scolymocephalus Africana foliis anguſtis brevioribus, trilobis in ſummitate.

3. *Leucodendron foliis craſſis, nervoſis, lanuginoſis, extremitatibus crenatis.*
The Leucodendron with thick, nervous, lanuginous leaves, crenated at the top.

The root of this ſpecies is large, woody, and branched: from this riſes a very ſhort trunk, which often grows, however, to four feet in diameter; from the head of this, which ſeems as if cut off, there riſe a vaſt number of branches, which grow to a conſiderable length. The bark of the trunk is brown and cracked, that of the young ſhoots green and hairy. The leaves ſtand very thick together, and are rigid, nervous, very thick and hairy, crenated at the extremity, and tinged with purple at the edge. At the tops of the branches ſtand the flowers, among cluſters of leaves; they are large, very beautiful, and of a deep yellow. The common calyx finally becomes a fruit, of a conic figure, which eaſily falls off.

This is, like the others, a native of the Cape of Good Hope. Herman calls it, Leucodendros Africana foliis ſerratis; and Boerhaave, Conocarpodendron folio craſſo, nervoſo, lanuginoſo, flore aureo, cono facile deciduo.

The other ſpecies of the Leucodendron are, 1. The round-leaved kind, with large purple flowers. 2. The Leucodendron with hairy ſquammæ. 3. The narrow willow-leaved, violet-flowered Leucodendron. 4. The Leucodendron with ſhort leaves and a variegated calyx. 5. The ſhort-fruited Leucodendron. 6. The long conic-fruited Leucodendron. 7. The Leucodendron with long, narrow leaves ſurrounding the fruit. 8. The ſmall-fruited, herbaceous Leucodendron. 9. The variegated, cupped, herbaceous, and procumbent Leucodendron. 10. The graſſy-leaved Leucodendron. 11. The Leucodendron with ſhort, cluſtered, ſilky leaves. 12. The round, rigid-

leaved

leaved Leucodendron, with a long, variegated fruit: and, 13. The Leucodendron with leaves deeply ſerrated at their extremities.

PROTEA.

THE calyx of the Protea is a common perianthium, of a roundiſh figure, and imbricated ſtructure, formed of ſquammæ of a ſomewhat oval ſhape. The univerſal corolla is uniform, and is a little longer than the cup: the peculiar corolla is monopetalous: it's tube is of the length of the cup: it's limb is divided into four ſegments, and is ſmooth, patent, equal, and of the length of the tube. The ſtamina are four ſetaceous filaments, and are longer than the flower: the antheræ are incumbent: the germen of the piſtil is of a roundiſh figure: the ſtyle is ſetaceous and erect; the length of it is the ſame with that of the ſtamina: the ſtigma is obtuſe. There is no pericarpium: the calyx remains unaltered, and contains the ſeeds, which are ſingle, roundiſh, and naked: the receptacle is of a conic figure, and ſeparated by paleæ. Boerhaave deſcribes this genus under the name of Conocarpodendron; Tournefort, after Plukenet, calls it Leucodendros; and Commelin, Argyrodendros: Ray, Conophoros.

1. *Protea foliis anguſtis rigidis, apicibus integris.*
The narrow, rigid-leaved Protea, with undivided extremities.

The root of this ſpecies is compoſed of a number of thick and variouſly extended ramifications. The trunk riſes ſingle, four inches in diameter, and covered with a yellowiſh bark, rough and full of cracks. From the trunk there riſe a number of branches, robuſt and thick, and variouſly divided into others: in the whole it grows to about eight feet high. The leaves ſtand irregularly, and not thick together; they are long, narrow, and much reſemble thoſe of the common willow, but that they are rigid to the touch: they are of a blue-green colour, but the middle rib is yellow. There grow cluſters of leaves at the extremities of the branches, which form a kind of circular congeries, from the center of which riſes a conic head, of the bigneſs of a cone of the larix, containing the flowers, which are very ſmall, and of which ſcarcely any thing but the ſtamina appear.

This ſpecies is frequent about the Cape of Good Hope. Sherard, in Ray's Hiſtory, calls it, Scolymocephalus oleæ folio. Boerhaave, Conocarpodendron folio rigido, craſſo, anguſto, cono laricis parvo.

2. *Protea foliis anguſtis rigidis, apicibus tridentatis.*
The Protea with narrow, rigid leaves, tridentated at the extremities.

The root of this ſpecies is compoſed of a number of creeping, very long, and ſlender ramifications. The ſtem is procumbent, and does not riſe ſingle, but uſually ſeveral together: from the main ſtalk there proceed a great number of branches, all long and weak, ſo that they alſo, in part, trail upon the ground. The leaves ſtand irregularly on theſe; they have ſcarce any pedicles; they are oblong, and are very narrow at the baſe, from whence they gradually become wider to the extremity, where they are conſiderably broad and obtuſe, but terminated by a tridentated apex: this part is red, the reſt of a pale green. At ſeveral different parts of the branches, among the leaves, grow the cones; they are ſmall and ſquammoſe, purpliſh toward the ſummit, and yellowiſh toward the baſe. The flowers are ſmall and yellow; they every-where ſurround the ſurface of the cone.

This ſpecies grows abundantly in many parts of Africa. Herman calls it, Scolymocephalus humilis, foliis in apice tridentatis. Boerhaave, Conocarpodendron folio rigido anguſto, apice tridentate rubro, flore aureo.

3. *Protea foliis anguſtis brevibus.*
The ſhort and narrow-leaved Protea.

The root of this ſpecies is compoſed of a number of large ramifications, running under the ſurface of the ground. The whole ſhrub rarely exceeds three or four feet in height: it riſes with a thick ſtem, or trunk, which ſoon divaricates into a multitude of branches, ſo as to form a very beautiful tuft. The wood is green, the bark yellowiſh:

yellowiſh: the leaves are narrow and ſhort, rigid to the touch, ſmooth, and of a bluiſh-green colour. At the extremities of the branches there ſtand cluſters of yellowiſh leaves, in a circular order, which form a kind of calyx, from the center of which riſes the cone, which is ſmall, ſquammoſe, and variegated with red and yellow: the baſe of the cone is it's extremity; it adheres by the apex: the flowers are very ſmall, the ſeeds blackiſh.

This ſpecies is frequent on the rocky mountains of Africa. Herman calls it, Scolymocephalus Africana foliis brevibus. Boerhaave, Conocarpodendron folio anguſto rigido breviore, cono parvo aureo corona foliacea cincto.

The other ſpecies of the Protea are, 1. The broad, ſilvery-leaved Protea, called the Atlas-tree. 2. The roundiſh-leaved Protea. 3. The very long and narrow-leaved Protea: and, 4. The very narrow and thin-leaved water Protea. Boerhaave has deſcribed ſeveral other ſpecies of the Conocarpodendron, but they belong to the former genus, not this.

CEPHALANTHUS.

THE calyx of the Cephalanthus conſiſts of a common perianthium, which contains ſeveral flowers, collected into a kind of head, and of a proper perianthium, which is erect, permanent, and divided into four ſegments. The corolla conſiſts of a ſingle petal: the tube is ſlender: the limb is divided into four parts, acute, reflex, and of the length of the tube. The ſtamina are four filaments, inſerted into the corolla, and ſhorter than it's limb; the antheræ are ſimple: the germen of the piſtil is placed within the flower: the ſtyle and the ſtigma are both ſimple. The fruit is an oblong capſule, containing only one cell: ſeveral of theſe grow together, and form a roundiſh head. The ſeeds are numerous, and oblong: the flower has it's limb ſometimes divided into five ſegments; inſtead of four, and then the proper perianthium has alſo five ſegments, and there are five ſtamina.

Vaillant and Van Rheede call this genus, Platanocephalus; Petiver, Valerianoides.

1. *Cephalanthus foliis oppoſitis ternatiſque.*
The Cephalanthus, with oppoſite and ternate leaves.

The root of this ſpecies conſiſts of a number of ramifications, ſpreading various ways under the ſurface. The ſtem is firm and woody, and grows to a conſiderable ſize: the branches grow to a conſiderable length: the bark is green; the wood reddiſh, with ſome yellowiſh circles, and a greeniſh heart: the leaves are oblong and broad; they are of a bright green, narrow at the baſe, and terminate in a point at the extremity: they ſtand uſually three together, ſurrounding the ſtalks; they are ſomewhat rough to the touch, and of a bitter taſte. The flowers grow in cluſters, at the tops of the branches, and are of a yellowiſh colour.

This ſpecies is a native of North America; we have it in ſome of our greenhouſes. Vaillant calls it, Platanocephalus foliis ex adverſo ternis; Petiver, Valerianoides Americana flore globoſo, folio piſhaminis; Plukenet, Scabioſa dendroides Americana ternis foliis.

GLOBULARIA.

THE common perianthium of the Globularia is imbricated, and of the length of the floſcules: the proper perianthium is formed of a ſingle leaf, tubulated, and divided into five ſegments at the extremity: the univerſal corolla is nearly equal: the proper corolla is formed of a ſingle petal, tubular at the baſe, and divided into four ſegments at the edge; the upper ſegment is ſmall and reflex; the three lower ones are larger, equal in ſize, and form a kind of lower lip. The ſtamina are four ſimple filaments, of the length of the corollula: the antheræ are diſtinct: the germen of the piſtil is of an oval figure: the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is obtuſe: there is no pericarpium: the proper perianthium cloſes at it's top, and contains the ſeed, which is ſingle, and of an oval figure. The common receptacle is oblong, and divided by paleæ.

This genus comprehends the Globularia of Tournefort, &c. and the Alypum of Niſſole and Dillenius.

1. *Globularia caule herbaceo, foliis radicalibus tridentatis, caulinis integerrimis.*
The herbaceous-ſtalked Globularia, with the radical leaves tridentated, the others intire.

The root of this ſpecies is oblong and ſlender, reddiſh on the outſide, and white within, hard, woody, and furniſhed with a few white fibres. From this riſe a number of ſhort, and ſomewhat broad, leaves, thick, nervous, and ſmooth, and tridentated at the extremities: among theſe riſes the ſtalk, uſually ſingle, but ſometimes three or four grow together. It grows to five or ſix inches high, ſometimes to more than twice that height; it is round, ſtriated, and uſually of a reddiſh colour, and has on it a number of leaves, not divided, like thoſe which riſe immediately from the root, but ſhorter, and intire. At the top of the ſtalk ſtands a roundiſh, or oval, head, or cluſter of flowers; they are of a beautiful blue colour, ſmall, and arranged cloſe together.

This is not a native of England, but is frequent in France, Germany, Sweden, and many other parts of Europe. Cluſius calls it, Globularia; C. Bauhine, Bellis cerulea caule folioſo; Anguillara, Aphyllanthes.

2. *Globularia caule herbaceo nudo.*
The Globularia, with a naked, herbaceous ſtalk.

The root of this ſpecies conſiſts of a cluſter of white fibres, of the thickneſs of a ſmall packthread. From this ariſes a cluſter of oblong, and broad, leaves, of a dark green colour, and ſmooth ſurface: from the center of this tuft of leaves riſes a ſingle ſtalk, round, ſomewhat ſtriated, and of eight or ten inches in height; it has no leaves on it, but is perfectly naked to the top, where there ſtands a roundiſh head, compoſed of a great number of flowers, of a beautiful pale blue.

This ſpecies is a native of the mountainous parts of Germany. C. Bauhine calls it, Bellis cærulea caule nudo. Tournefort, Globularia Pyrenaica caule nudo.

3. *Globularia fruticoſa, foliis brevibus tridentatis.* Alypum of Montpelier.
The ſhrubby Globularia, with ſhort, tridentated leaves.

This ſpecies is a ſmall ſhrub; it's root is thick, oblong, of a blackiſh colour, and very hard and woody. It's ſtem grows to three quarters of an inch, or more, in diameter, and divides into a number of thin, but firm and woody, branches, covered with a ſmooth, reddiſh bark: the whole ſhrub grows to about three feet in height. The leaves ſtand irregularly on the ſtalks, and are uſually reddiſh; they are about three quarters of an inch in length, and are very narrow at the baſe, and thence grow broader to the extremity, where they are uſually terminated by three points: they are thick, and very bitter to the taſte. The flowers ſtand at the tops, and along the ſides of the branches; they are collected into a kind of ſmall heads, and are of a reddiſh or purpliſh colour.

This ſpecies is not met with native in England, but it is very frequent in Germany, Italy, and ſome parts of France. Authors call it, Thymelæa and Alypum. It is a violent cathartic and emetic, and is ſometimes given in dropſies, with ſucceſs; but it is to be uſed with caution. It's bark contains it's principal virtues.

The other ſpecies of the Globularia are, 1. The little, creeping, woody-ſtalked Globularia. 2. The ſhrubby, African Globularia, with hoary, ſhort leaves. 3. The ſpinoſe Globularia. 4. The little, Alpine, origanum-leaved Globularia: and, 5. The Globularia, with flowers in the alæ of the leaves.

DIPSACUS.

THE common perianthium of the Dipſacus is compoſed of many leaves, and contains many flowers: the leaves are narrow, longer than the flowers, and permanent: the proper perianthium is ſcarce viſible; it ſtands on the germen. The corolla is formed of a ſingle petal, which is ſtrait, tubular all the way, and divided into four

ſegments

ſegments at the mouth: the exterior ſegment is larger than the others, and acute. The ſtamina are four capillary filaments, longer than the corolla: the antheræ are incumbent: the germen of the piſtil ſtands within the proper perianthium: the ſtyle is capillary, of the length of the corolla: the ſtigma is ſimple: there is no pericarpium. The ſeeds are ſingle, and of a columnar figure, and are coronated with an undivided edge: the common receptacle is conic, and formed of a ſpungy body, with a multitude of paleæ.

1. *Dipſacus capitulis florum conicis.* Common Teaſel.
The conic-headed Dipſacus.

The root of this ſpecies is oblong, white, thick, and furniſhed with ſeveral fibres. The leaves, which riſe in a cluſter from this, are a foot, or more, in length, and four inches in breadth, with large ribs, and ſome ſpines on them. The ſtalk is ſingle; it grows to five feet high, and is whitiſh, round, and hollow, beſet with prickles, eſpecially toward the top. The leaves ſtand two at a joint, and their baſes are joined, and ſurround the ſtalk in ſuch a manner as to form a kind of baſon, in which ſtands uſually a quantity of water: theſe have a few ſerratures at their edges, and a row of hooked ſpines along the middle rib. Toward the top of the ſtalk there grow out branches in pairs; from the alæ of the leaves, and on the ſummits of theſe, as well as of the main ſtalk, ſtand the heads; they are of an obtuſely conic figure, and of the ſize of a hen's egg: the flowers are ſmall, and of a reddiſh colour.

This ſpecies is frequent with us in uncultivated places, and by road-ſides. C. Bauhine calls it, Dipſacus ſylveſtris aut virga paſtoris major; others, Labrum veneris.

2. *Dipſacus capitulis florum ſubgloboſis.* Little Teaſel.
The round-headed Dipſacus.

This is a ſmaller plant than the former. It's root is oblong and white, furniſhed with a number of fibres, and does not deſcend very deep into the ground: the ſtalk is of the thickneſs of a man's finger, round, hollow, greeniſh, and rigid on the ſurface, with ſharp ſpines on the ridges; toward the top it is divided into many branches. The leaves ſtand in pairs on the ſtalk, and both theſe and the radical ones are very like thoſe of the common Dipſacus, but ſmaller, and do not embrace the ſtalk, or form a cavity about it, as in that ſpecies: at the baſe of each leaf there are two auriculæ: the pedicle is an inch in length, and the leaf broadeſt in the middle, ſerrated at the edges, and armed with ſpines on the under ſurface. At the tops of the ſtalks and branches ſtand round heads, of the bigneſs of a nutmeg, furniſhed with numerous, ſmall, white flowers.

This ſpecies is frequent with us by road-ſides, and in dry paſtures. C. Bauhine calls it, Dipſacus ſylveſtris capitulo minore, ſive virga paſtoris.

The other ſpecies of Dipſacus are, 1. The laciniated-leaved Dipſacus. 2. The ſmooth, four-leaved Dipſacus, with ſcabious-like leaves. 3. The great Indian Dipſacus, with cluſtered heads: and, 4. The jagged-leaved Dipſacus, with ſmooth, oval heads. Authors deſcribe alſo what they call a Dipſacus ſativus; but this is only the firſt ſpecies deſcribed here, rendered larger by culture. The heads of this kind are uſed in dreſſing cloaths, and the leaves are a good ſtomachic, but they are not much known as ſuch.

SCABIOSA.

THE common perianthium of the Scabioſa is formed of many leaves, ſurrounding the receptacle in ſeveral ſeries, and fixed on it; the inner ones of theſe are ſmaller than the outer; the whole is patent, and contains many flowers. The proper perianthium is double; both, however, are fixed on the germen; of theſe the exterior one is permanent, ſhort, membranaceous, and plicated; the interior one is divided into five ſubulato-capillaceous ſegments. The corolla conſiſts of a ſingle petal; this is erect, tubulated, narroweſt at the baſe, and thence gradually wider, and ſlightly divided into either four or five ſegments, of which the exterior ones are the larger. The ſtamina are four ſubulato-capillary, weak filaments: the antheræ are oblong and incumbent: the germen of the piſtil is placed below the receptacle of the floſcule,

and

and is ſurrounded with a peculiar vagina, by way of another cup. The ſtyle is filiform, and of the length of the corolla: the ſtigma is obtuſe, and obliquely emarginated. There is no pericarpium; but the common receptacle, which is of a convex figure, ſupplies the place of one: the ſeeds are ſingle, and of an ovato-oblong figure, crowned with their proper calyx.

The figure in this genus is very irregular and uncertain. The exterior corollulæ are often larger than the others, and unequal: the coronæ of the ſeeds alſo are of various ſhapes. This genus comprehends the Scabioſa of Tournefort, &c. and the Aſterocephalus, Pterocephalus, and Succiſa, of Vaillant.

1. *Scabioſa corollulis quadrifidis, corollis radiatis.* Common Scabious.
The radiated Scabious, with quadrifid flowers, and hairy ſtalks.

The root of this ſpecies is ſingle, white, and long. From this ariſes a cluſter of oblong, hairy leaves, of a whitiſh-green colour: among theſe riſe two or three ſtalks, which grow to near three feet high; they are round, hollow, and hairy: the leaves ſtand in pairs, at the joints of the ſtalks, which are very diſtant from one another; they are oblong, and variouſly laciniated at the edges, of a whitiſh-green, and very hoary. At the top of the ſtalk, and of the ſeveral branches, ſtand the flowers, in large numbers together, collected into roundiſh, but depreſſed, heads: they are uſually of a a beautiful blue colour, ſometimes reddiſh.

This ſpecies is very common in our corn-fields, and in dry paſtures. C. Bauhine calls it, Scabioſa pratenſis hirſutaquæ officinarum; others, Scabioſa major vulgaris.

2. *Scabioſa corollulis quadrifidis, caule ſimplici, ramis approximatis, foliis lanceolato-ovatis.* Devil's-Bit.
The quadrifid-flowered Scabious, with lanceolato-ovated leaves.

The root of this ſpecies is of the thickneſs of a man's little finger, but ſhort, and ſeeming as if bitten off at the extremity, from whence there iſſue a multitude of fibres. From this riſes a cluſter of leaves, oblong, broadeſt in the middle, of a dark green colour, and pointed at the ends, a little hairy, and, for the moſt part, even at the edges: among theſe riſe the ſtalks; they are ſimple, round, and ſolid, not hollow, as in the common Scabious. The leaves ſtand in pairs, at the joints, which are very far aſunder; and at the top of the main ſtalk and of the branches, which iſſue from the alæ of the leaves at the ſides, there ſtand round heads, compoſed of blue flowers, all of the ſame ſize.

This ſpecies is frequent with us, in meadows and paſtures. C. Bauhine calls it, Succiſa glabra; J. Bauhine, Succiſa ſive morſus diaboli.

3. *Scabioſa capitulis oblongis, corollulis majuſculis, foliis diſſectis.* Musk Scabious.
The long-headed, large-flowered Scabious, with diſſected leaves.

The root of this ſpecies conſiſts of a multitude of white fibres. From this ariſes a cluſter of oblong leaves, of a dark green colour, crenated, more or leſs, deeply about the edges: among theſe riſe a great number of ſtalks, which grow to two or three feet high; they are very ſlender, and have at every joint two leaves, deeply diſſected and laciniated, and not at all like thoſe which grow immediately from the root. Toward the top of the ſtalk there grow a great number of branches, and, at the extremities of theſe, ſtand the heads: the flowers are of a deep blackiſh-purple, and ſmell not ſo much like muſk as civet.

This ſpecies is a native of the Eaſt Indies, but it is very frequent in our gardens. C. Bauhine calls it, Scabioſa peregrina capitulo oblongo nigricante, odore zibethi.

Beſide theſe, there are a great number of ſpecies of Scabious, and a very great number of varieties deſcribed as ſpecies. The moſt ſingular and certainly diſtinct are, 1. The blue-flowered, ſhrubby Scabious. 2. The agrimony-leaved, annual Scabious.

3. The

3. The yellow-flowered, multifid-leaved Scabious. 4. The broad-leaved, proliferous Scabious. 5. The narrow-leaved, proliferous Scabious. 6. The great, centaury-leaved Scabious. 7. The red-flowered, jagged-leaved Scabious. 8. The great, long-headed, red-flowered Scabious. 9. The round-headed, ſmall, field ſcabious. 10. The great-leaved, ſtellate, Spaniſh Scabious. 11. The little, ſtellate Scabious, called by Columna, Phyteuma. 12. The ſhrubby Scabious, with procumbent branches. 13. The great, African, arboreſcent Scabious. 14. The graſs-leaved Scabious. 15. The fraxinella-leaved Scabious. 16. The auricula-leaved Scabious. 17. The yellow-flowered, great, centaury-leaved Scabious. 18. The great, ſcorzonera-leaved Scabious.

The common-field Scabious, internally, is a pectoral, and it's leaves are a common ingredient in decoctions of that kind. Externally, it cures breakings out in the ſkin. The way of uſing it is boiling the juice to the conſiſtence of an ointment with lard.

KNAUTIA.

THE common perianthium of the Knautia is ſimple, cylindric, oblong, and erect. It contains a number of floſcules, arranged into a ſimple, orbicular ſeries, and is formed of a number of ſubulated ſegments, equal to that of the flowers, and placed cloſe to one another. The proper perianthium is very ſmall, and forms a kind of corona on the germen. The univerſal corolla is equal: the proper, or ſimple, corolla is unequal; it conſiſts of a ſingle petal, the tube of which is of the length of the cup, and the limb is divided into four unequal ſegments; the exterior one of which is larger than the reſt, and of an oval figure. The ſtamina are four filaments, larger than the tube of the flower, and inſerted in the receptacle: the antheræ are oblong and incumbent. The germen of the piſtil is placed below the proper receptacle of the flower: the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is ſomewhat thick and bifid. There is no pericarpium; it's office is performed by the common receptacle, which is plane, naked, and ſcarce obſervable. The ſeeds are ſingle, of a ſquare figure, and hairy at the top

This genus is nearly allied to the Scabious, but differs in the calyx, being tubulated, and the flowers placed in a ſimple, orbicular ſeries. Boerhaave calls it, Lychni ſcabioſa.

Of this ſingular genus there is only one known ſpecies.

KNAUTIA.

The root of the Knautia conſiſts of a number of white fibres, variouſly implicated and entangled: from this riſes a cluſter of leaves of a pale green colour, oblong, and indented at the edges; among theſe grow up ſeveral ſtalks, round, ſlender, green, and hairy. The leaves ſtand two at every joint, and are alſo hairy, and of paler green than thoſe which riſe immediately from the root; at the tops of the ſtalk and branches ſtand the heads; they are not round, but compreſſed, and have only one row of flowers ſurrounding the baſe. Theſe are moderately large, and of a beautiful red colour; and the whole compound flower, from their particular arrangement, has rather the appearance of that of ſome of the lychnis-kind, than of what it really is, till nearly examined.

The Knautia is a native of the Eaſt Indies, but it is a hardy plant, and bears the open air in ſome of our gardens. Boerhaave calls it, Lychni ſcabioſa flore rubro annua; and Vaillant, Scabioſa orientalis caryophylli flore.

Class the Fourth. Order the First.

Division the Second.

Tetrandria Monogynia, with monopetalous flowers placed on didymous fruits, and with a bifid style in the flower. This division comprehends the Herbæ Stellatæ of Ray, and others.

ASPERULA.

THE calyx of the Asperula is a small perianthium, placed on the germen, and consisting of a single leaf, divided into four short segments at the edge. The corolla consists of a single petal: the tube is cylindric and long; the limb is divided into four obtuse, oblong, reflex segments. The stamina are four filaments, affixed to the upper part of the tube: the antheræ are simple. The germen is didymous, roundish, and situated below the cup. The style is filiform, and bifid at top: the stigmata are capitated. The fruit consists of two round, dry berries, growing to one another: the seeds are single, round, and large.

1. *Asperula foliis senis, floribus sessilibus.* **Blue Woodruff.**
The six-leaved Asperula, with sessile flowers.

The root of this species consists of a cluster of whitish fibres; the stalk is square, rigid, and thick, and grows to a foot and half in height. At every joint there stand six, or more, oblong, slender, pointed leaves, of a dusky green colour; at the top of the main stalk, and at the extremities of the several branches, there stand on long pedicles clusters of flowers, all sessile, and thick-set together; they are moderately large, and of a beautiful blue colour, and every cluster is surrounded with a series of leaves, disposed in a radiated manner, and exceeding the flowers in length.

This species is not a native of England, but is very common in the corn-fields of France and Germany. C. Bauhine calls it, Asperula cærulea arvensis.

2. *Asperula foliis octonis lanceolatis, floribus fasciculatis pedunculatis.* **Common Woodruff.**
The eight-leaved, lanceolate Asperula, with fasciculated flowers on pedicles.

The root of this species is small, oblong, and creeping, and is furnished with a number of fibres. The stalks are square; they grow to about a foot in height, but they are weak. At every joint there stand about eight leaves, of a dark green colour, oblong, narrow, and pointed at the extremities; they are disposed in a radiated manner. The stalk divides near the top into two or three ramifications, and on the summits of these stand clusters of moderately large, white flowers, each standing on a somewhat long pedicle: these have a very sweet smell.

This species is frequent in our woods; it flowers in May. C. Bauhine calls it, Asperula sive rubeola montana, odora. Dodonæus, Asperula odorata; and Tournefort, Aparine latifolia humilior montana.

3. *Asperula foliis quaternis linearibus, floribus trifidis.* **Squinancy Wort.**
The four-leaved Asperula, with linear leaves, and trifid flowers.

The root of this little plant is very long, and penetrates deep into the earth; it is black, hard, and woody, and is furnished with a multitude of small fibres. From this rise a number of small, weak stalks, four or five inches long, and in great part procumbent: they are square, and of a pale green colour, and they often grow greatly beyond their usual length, but are in that case procumbent, and take root at the joints.

On

On the lower part of the ſtalk the joints ſtand very thick; higher up, they are more diſtant from one another: at every joint there ſtand four ſmooth, narrow leaves, except at the ſummits of the branches, where there uſually are only two at a joint. The flowers ſtand in cluſters on the tops of the ſtalks, and form a kind of umbels; they are of a pale red colour, and ſweet ſmell.

This ſpecies is found in many parts of England, in mountainous, but wet, places; it flowers in June. C. Bauhine calls it, Rubia ſynanchica; others, Synanchica. Tournefort calls it, Rubeola vulgaris quadrifolia lævis floribus albidis.

SHERARDIA.

THE calyx of the Sherardia is a ſmall perianthium, formed of a ſingle leaf, placed upon the germen, quadridentated at the edge, and permanent. The corolla conſiſts of a ſingle petal; the tube is cylindric and long; the limb divided into four ſegments, acute and plane. The ſtamina are four filaments, placed at the top of the tube; the antheræ are ſimple. The germen is didymous and oblong, and placed below the receptacle: the ſtyle is filiform, and divided into two parts toward the top: the ſtigmata are capitated: there is no pericarpium. The fruit is compoſed of two ſeeds, and is oblong, coronated, and eaſily ſplits longitudinally. The ſeeds are oblong, and have three points at the top, and are flat on one ſide, and convex on the other.

Of this genus there is only one known ſpecies, and that has been, by moſt authors, ranked among the Rubiæ.

SHERARDIA. Little Field Madder.

The root of this little plant is oblong and ſlender, and penetrates deep into the ground; it is hard and woody, and of a reddiſh colour. From this grow ſeveral ſtalks, which lie procumbent on the earth; they grow to ſix or eight inches long, and are ſquare and hairy, ſometimes branched, and uſually of a reddiſh colour; at every joint of the ſtalk there ſtand ſeveral leaves arranged, in form of a radiated ſtar; they are ſmall, hairy, rough to the touch, broad, but terminating in a point: at the tops of the branches ſtand cluſters of ſmall, blue flowers, ſurrounded with a corona of leaves.

This plant is frequent in our corn-fields, and is deſcribed by all the old writers in botany. C. Bauhine calls it, Rubeola arvenſis repens cærulea. Boerhaave, Aſperula cærulea repens; and Tournefort, Aparine ſupina flore cæruleo.

SPERMACOCE.

THE calyx of the Spermacoce is a ſmall perianthium, formed of a ſingle leaf, quadridentated at the edge, affixed upon the germen, and permanent. The corolla conſiſts of a ſingle petal: the tube is cylindric, and longer than the cup; the limb is divided into four parts, patenti-reflex, and obtuſe. The ſtamina are four ſubulated filaments, ſhorter than the corolla; the antheræ are ſimple. The germen is roundiſh, compreſſed, and placed below the receptacle; the ſtyle is ſimple and bifid at the top, and the ſtigmata are obtuſe. The fruit conſiſts of two oblong capſules, growing together, gibbous on one ſide, plane on the other, and obtuſe; and each of them has two horns, or points. The ſeeds are ſingle and roundiſh.

1. *Spermacoce verticillis globoſis.*
The globular cluſtered Spermacoce.

The root is white and fibrous: the ſtalks are numerous, ſquare, of a yellowiſh colour at the bottom, and green at the top. The leaves ſtand two at each joint; they are ſmooth, of a deep green, about an inch long, a third of an inch broad in the middle, narrow at the baſe, and pointed at the end. The radical leaves are of the ſame length, but broader: the plant riſes to a foot and half high; the flowers ſtand in thick cluſters at the tops of the ſtalks, and round the upper joints: they are ſmall and white, and the cluſters are about as big as a nutmeg.

It

It is a native of Africa, but is in ſome of our gardens. Dillenius calls it, Spermacoce verticillis globoſis.

The other ſpecies are, 1. The broader-leaved Spermacoce, with ſmaller cluſters; 2. The larger-flowered Spermacoce.

HEDYOTIS.

THE calyx is a ſmall perianthium, divided into four ſhort ſegments at the edge: the corolla conſiſts of a ſingle petal. It is of an infundibuliform ſhape, and very open at the mouth. The ſtamina are four moderately thick filaments: the antheræ are ſimple and large; the germen is roundiſh; the ſtyle is ſmall, and the ſtigma obtuſe: the fruit is a capſule, containing two cells, and in them a great number of ſmall ſeeds.

There is but one known ſpecies of this genus, and that is ſo well diſtinguiſhed by theſe characters, that it needs no farther deſcription.

KNOXIA.

THE calyx is a perianthium, compoſed of a ſingle leaf, divided into four ſegments, one of which is larger than the reſt. The corolla conſiſts of a ſingle petal, of an infundibuliform ſhape: the ſtamina are four oblong, ſlender filaments; the antheræ are large and ſimple. The germen is roundiſh; the ſtyle ſimple, and moderately thick; the ſtigma ſmall; the ſeeds are two, and ſulcated.

This genus is very nearly allied to the Hedyotis. There is but one known ſpecies of it, and that is ſo ſufficiently diſtinguiſhed by it's characters, as to need no farther deſcription.

DIODIA.

THE calyx of the Diodia is a perianthium, compoſed of two leaves, which are equal, of a ſubovate figure, and are affixed upon the germen, and permanent. The corolla is compoſed of a ſingle petal, and is of the ringent kind: the tube is ſlender, and longer than the cup: the upper lip is erect and bifid; the lower lip is patent, and divided into two lanceolated ſegments. The ſtamina are four erect, ſetaceous filaments, the two oppoſite ones ſomewhat longer than the other two; the antheræ are oblong and verſatile. The germen is of a roundiſh, but ſomewhat obſcurely ſquared, figure: the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is bifid. The fruit is an oval, quadrangular capſule, coronated and formed of two valves, and containing two cells: the ſeeds are ſingle, of an ovato-oblong figure, ſmooth and flat on one ſide, and convex on the other.

Of this genus there is but one known ſpecies; it approaches greatly to the Melampyrum, but it is a diſtinct genus. It is too well diſtinguiſhed by it's characters, to need any farther deſcription. It is a native of Virginia.

CRUCIANELLA.

THE calyx of the Crucianella is compoſed of three leaves of a lanceolated figure, hollowed, pointed, and rigid, ſomewhat compreſſed and connivent. The corolla conſiſts of a ſingle petal: the tube is cylindric, filiform, and longer than the cup; the limb is ſmall, and divided into four parts. The ſtamina are four filaments, placed in the mouth of the tube: the antheræ are ſimple. The germen is compreſſed, and placed between the calyx and the corolla; the ſtyle is filiform, and of the length of the tube; and the ſtigmata are two in number, and obtuſe; one of theſe terminates the ſtyle, and the other ſtands ſeſſile below it's extremity. The fruit conſiſts of two capſules, which grow together: the ſeeds are ſingle and oblong.

This genus comprehends the Rubeola of Tournefort.

1. *Crucianella*

1. *Crucianella erecta foliis senis.* **Narrow-leaved, spiked Madder.**
The erect, six-leaved Crucianella.

The root of this species is oblong and hard, of a dusky reddish colour, and furnished with a great number of fibres. From this there usually arise six or eight stalks; they are square, rough, and frequently jointed: from every joint there grow several branches opposite to one another, and at every joint there stand six leaves, oblong, narrow, somewhat rough, and pointed at the ends. On the tops of the stalks stand long and narrow spikes, of whitish flowers. The whole plant grows to ten or twelve inches high, and is very well able to support itself erect.

We have it not native in England, but in France it is common, and also in Germany. Tournefort calls it, Rubeola angustiore folio. C. Bauhine, Rubia angustifolia spicata.

2. *Crucianella procumbens foliis quaternis.*
The procumbent Crucianella, with four leaves at a joint.

The root of this species is moderately large, oblong, crooked, woody, of a reddish colour, and furnished with a number of fibres. From this rise several stalks, which are square, and somewhat hairy, but they trail upon the ground. At every joint of these stalks there stand four leaves, disposed in form of a radiated star, and of a lanceolated figure; from the alæ of these leaves there also grow stalks all the way up the plant, so that, when full grown, it makes a very bushy figure. At the top of the main stalk, and of several of the branches, there stand spikes of flowers very long, appearing of a kind of square figure, and greenish colour: the flowers themselves are very small and greenish.

This species is a native of some parts of France, and is common in the Islands of the Archipelago. We have it in some of our gardens. Tournefort calls it, Rubeola latiore folio. C. Bauhine, Rubia latifolia spicata.

HOUSTONIA.

THE calyx of the Houstonia is an extreamly small perianthium; it is erect, permanent, and quadridentated. The corolla consists of a single petal, and is of an infundibuliform shape: the tube is cylindric, and long; the limb is patent, and is divided into four roundish segments. The stamina are four very small filaments, situate in the neck of the corolla: the antheræ are simple; the germen is roundish and compressed: the style is simple, and shorter than the stamina: the stigma is bifid and acute. The fruit is a roundish, didymous capsule, composed of two valves, and containing two cells, in each of which is a single seed.

Of this genus there is only one known species.

HOUSTONIA.

The root is fibrous; the radical leaves are about half an inch long, narrow, and pointed at the ends; they lie expanded circularly on the ground. The stalks are numerous, round, smooth, and three or four inches high; they run up naked to about two inches, where they have a knot, at which grow two or three leaves: at this place also the stalk divides into two or three parts, and on the summit of each of these stands a single flower, moderately large, and of a beautiful blue colour.

It is a native of Virginia. Morison calls it, Paronychiæ facie planta tetrapetaloides Virginiana flore cæruleo.

GALLIUM.

THE calyx of the Gallium is a very small perianthium, composed of one leaf, quadridentated at the edge, and fixed upon the germen. The corolla consists of a single petal, which has no tube, but is divided into four segments, plane and acute: the stamina are four subulated filaments, shorter than the corolla: the antheræ are simple: the germen is didymous, and stands below the receptacle: the style is filiform,

of the length of the ſtamina, and ſemibifid; the ſtigmata are capitatad. The fruit conſiſts of two dry berries of a globoſe figure, growing cloſe together, but not cohering: the ſeeds are ſingle, large, and umbilicated.

This genus comprehends the Gallium and the Aparine of Tournefort, and others, nay even of Linnæus himſelf; for, tho' there are the characters of theſe delivered ſeparately in his Genera Plantarum, 97 and 98, as of two genera, and under the two names of Gallium and Aparine, on compariſon they will be found to be the ſame; the very words are almoſt literally repeated.

1. *Gallium foliis plurimis linearibus, ramis floriferis brevibus.* **Yellow Ladies Bedſtraw.**

The many-leawed Gallium, with ſhort flowering branches.

The root of this ſpecies creeps a long way under the ſurface of the ground, and is ſlender, woody, and brown. From the ſeveral parts of this riſe ſtalks, which grow to two feet in height; they are roundiſh, and often red. At the joints ſtand numbers of very narrow leaves, in form of a ſtar, of a blackiſh-green colour, and pointed at the ends; there are uſually eight or nine at a joint: at each joint there commonly are alſo two branches; at the tops of theſe, as well as of the main ſtalks, ſtand cluſters of beautiful yellow flowers.

The plant is frequent in our paſtures, and by way-ſides. C. Bauhine calls it, Gallium luteum. Haller, Gallium foliis octonis graciliſſimis, ſpica florea caulem terminante.

2. *Gallium foliis pluribus acutis, caule flaccido, ramis patentiſſimis.* **White Ladies Bedſtraw.**

The acute and many-leaved Gallium, with a flaccid ſtalk, and patent branches.

The root of this ſpecies creeps under the ſurface, and is ſlender, jointed, and furniſhed with a multitude of fibres; from the joints riſe ſtalks, which grow to two feet, or more, in length, but are weak, and ſcarce able to ſupport themſelves quite erect. They are ſquare, and their joints ſtand at conſiderable diſtances: at every joint there are placed about eight leaves, in a radiated form; they are oblong, and pointed, and ſomewhat broad. At the top of the ſtalk, and of the branches, which are very numerous, ſtand great cluſters of white, ſmall flowers.

This ſpecies is very frequent with us in paſtures. Tournefort calls it, Gallium album vulgare. Haller, Gallium caule quadrangulo foliis octonis glabris, acuminatis.

3. *Gallium caule ſubaſpero, foliis lineari-lanceolatis ſpinulis terminatis.* **Little Cleavers.**

The rough-ſtalked Gallium, with lineari-lanceolated leaves, terminated by ſpines.

This is one of the Galliums commonly known under the name of an Aparine, but it differs greatly from the ſpecies, called Common Cleavers. It's root is ſlender and creeping, and from every joint ſends up two or three ſtalks; theſe are ſquare, but weak, and grow to about eight inches high. At every joint there ſtand four, five, or ſix leaves, narrow, and pointed at the extremity, ſomewhat rough to the touch, and of a greyiſh-green colour: at the top of the ſtalk ſtand little cluſters of white flowers, larger than thoſe of the common cleavers, though the plant itſelf is ſo much ſmaller.

This ſpecies is frequent with us under hedges in ſpring. Tournefort calls it, Aparine paluſtris minor Pariſienſis flore albo. Haller, Gallium caule ſubaſpero, foliis quaternis et ſenis ſpinula terminatis.

The other more ſingular ſpecies of this genus are, 1. of thoſe called Gallia: 1. The broad-leaved, branched, mountain Gallium. 2. The narrow-leaved, purple-flowered Gallium. 3. The annual, yellow Gallium. 4. The verticillate, yellow Gallium. 5. The glaucous-leaved Gallium. 6. The little moſſy Gallium. 2. Of thoſe called

Aparines,

Aparines, there are, 1. The common Aparine. 2. The ſmall-fruited Aparine. 3. The verrucous Aparine. 4. The echinated Aparine. 5. The little, narrow-leaved Aparine. 6. The purple, hoary-leaved Aparine.

The common Aparine is in ſome eſteem as an antiſcorbutic. The yellow Gallium is ſpoken of by ſome as ſingular, in that it yields an acid liquor in diſtillation: analyſes of plants were not common, when this was advanced: I know ſcarce any plant that does not yield ſuch an acid.

RUBIA.

THE calyx of the Rubia is a very ſmall perianthium, formed of one leaf, quadridentated, and affixed on the germen. The corolla conſiſts of a ſingle petal, without a tube; it is divided into four ſegments, plane, acute, and hollowed at the baſe: the ſtamina are four ſubulated filaments, ſhorter than the flower; the antheræ are ſimple: the germen is didymous; the ſtyle is filiform, and bifid at the top; the ſtigmata are capitated. The fruit conſiſts of two ſucculent, ſmooth, round berries, growing together: the ſeed is ſingle, roundiſh, and umbilicated.

1. *Rubia foliis ſenis.* Madder.
The ſix-leaved Madder.

The root of this ſpecies is long, moderately thick, and diſperſes itſelf under the ſurface every way; it is of a reddiſh colour, ſucculent and tender in the outer part, but with a woody fibre in the middle. It's taſte is partly ſweet, partly acute, and ſomewhat bitteriſh. The ſtalks grow to two or three feet; they are ſquare, weak, and rough to the touch, having a kind of ſharp, hooked ſpines ſet all the way down them. At every joint there ſtand ſix leaves in a radiated form; they are oblong, moderately broad, pointed, and rough to the touch: at the top of the ſtalk, and of the branches growing from the alæ of the leaves, ſtand cluſters of ſmall flowers of a greeniſh yellow colour.

This plant is not a native of England; it is cultivated in Germany, for the root. C. Bauhine calls it, Rubia tinctorum ſativa; others, Rubia hortenſis.

2. *Rubia foliis quaternis.* Wild Madder.
Four-leaved Madder.

The root of this ſpecies is compoſed of a number of long, ſlender ramifications, ſpreading every way under the ſurface; it is hard, of a browniſh colour, and of an auſtere taſte: the ſtalk riſes to a foot high, and at every joint has a ſet of leaves, uſually four, diſpoſed in a radiated form; theſe are ſhort, ſomewhat broad, pointed at the ends, and rough to the touch. At the top of the branches and of the main ſtalk ſtand cluſters of ſmall yellow flowers.

This ſpecies is a native of England, but not common. I met with it this year, near Colſterworth in Lincolnſhire, in conſiderable abundance. C. Bauhine calls it, Rubia ſylveſtris aſpera quæ ſylveſtris Dioſcoridis.

The root of the firſt ſpecies is uſed in dying; and alſo in medicine, as a deobſtruent.

Claſs the Fourth. Order the Firſt.

Diviſion the Third.

Tetrandria Monogynia, with monopetalous flowers, without the peculiar characters of the ſecond diviſion.

SIPHONANTHUS.

THE calyx is a ſmall perianthium: the corolla conſiſts of a ſingle petal, which is extreamly long, and placed below the germen. The ſtamina are four ſlender filaments; the antheræ are oblong, and thick: the fruit is a congeries of four roundiſh and moderately large berries, in each of which is contained a ſingle ſeed.

Theſe

These characters render the distinction of the Siphonanthus from the Catesbæa, and all the other plants of this class, too obvious to let it need any farther description.

CATESBÆA.

THE calyx of the Catesbæa is a very small perianthium, quadridentated, acute, and permanent. The corolla consists of a single petal, and is of a funnel-like shape: the tube is most remarkably long, strait, and thicker upwards than at the base: the limb is broad, lightly divided into four segments, and erecto-plane: the stamina are four filaments, situate within the tube of the corolla: the antheræ are oblong, erect, and reach to the extremity of the corolla: the germen is roundish, and placed below the calyx; the style is filiform, and of the length of the corolla: the stigma is simple: the pericarpium is an oval, coronated, unilocular berry: the seeds are numerous and angular.

This shrub is described by the late Mr Mark Catesby, from whom it is named, under the name of Lycium.

IXORA.

THE calyx of the Ixora is a very small perianthium, quadridentated, erect, and permanent. The corolla consists of a single petal; the tube is cylindric, very long and slender: the limb is plane, and divided into four oval segments: the stamina are four filaments, situate in the divisions of the corolla; they are very short and crooked; the antheræ are oblong: the germen is roundish; the style is filiform, and of the length of the tube; the stigma is bifid; the fruit is a berry of a roundish figure, with only one cell; the seeds are four in number, convex on one side, and angular on the other.

There is but one species of this genus, which is described in the second volume of the Hortus Malabaricus, T. 13, 14.

AVICENNA.

THE calyx of the Avicenna is a perianthium, consisting of one leaf, divided into five segments, acuminated, erect, and permanent. The corolla consists of a single petal, and is plane, and divided into four ovato-acuminated segments: the stamina are four subulated filaments, shorter than the corolla; the antheræ are bifid. The germen is oval; the style is subulated, short, and permanent; the stigma is acute. The perianthium is a coriaceous capsule, oval, but terminating in a point, containing only one cell, and not splitting open: the seed is single, compressed, and of an elliptic figure, and germinates within the pericarpium.

There is but one known species of this genus, which is described in the fourth volume of the Hortus Malabaricus, F. 45.

PENÆA.

THE calyx of the Penæa is a perianthium, consisting of two leaves; these are hollow, equal, coloured, of a lanceolated figure, placed opposite to one another, lax, deciduous, and but of about half the length of the corolla. The corolla consists of a single petal, and is of the campanulated kind: the limb is much shorter than the tube, and is patulous, and divided into four acute segments: the stamina are four very short filaments, and are affixed to the tube of the corolla, between the segments, and are erect and naked: the antheræ are erect, plane, and emarginated at each end: the germen is of an oval figure, but quadragonal: the style is rendered quadrangular also by four longitudinal, membranaceous alæ affixed to it: the stigma is cruciform, obtuse, and permanent. The fruit is a quadragonal capsule, with it's style remaining affixed to it; it is formed of four valves, and contains four cells. The seeds are two in each cell, and are oblong and obtuse.

The Sarcocolla of the shops has been supposed to be the produce of this plant, but erroneously.

PAVETTA.

PAVETTA.

THE calyx is a ſmall perianthium, divided into four ſegments at the extremity: the corolla conſiſts of a ſingle petal, which is of an infundibuliform ſhape, and ſtands upon the germen: the ſtamina are four ſubulated filaments: the germen is roundiſh, the ſtyle ſlender, and the ſtigma crooked. The fruit is a roundiſh, moderately large berry, containing only a ſingle ſeed.

The curvature of the ſtigma of the Pavetta is ſo obvious a diſtinction, that there needs no farther deſcription of it.

CALLICARPA.

THE calyx is a perianthium, divided into four ſegments at the edge: the corolla is expanded, and divided alſo into four ſegments: the ſtamina are four ſlender filaments: the antheræ are tumid and oblong: the germen is roundiſh; the ſtyle ſlender, and the ſtigma ſimple. The fruit is a ſingle, roundiſh berry, containing ſix ſeeds.

The number of ſeeds in the berry is a ſufficient diſtinction of the Callicarpa. We could wiſh to have had opportunity of being longer on all the genera, but it is neceſſary, in a work circumſcribed within the limits of ours, to be ſhort on the leſs eſſential parts, ſo nothing neceſſary to the knowledge of the ſcience is omitted, that we may have room to be ſufficiently large on the more intereſting particulars.

BLÆRIA.

THE calyx of the Blæria is a perianthium, compoſed of four little, erect, linear leaves, ſomewhat ſhorter than the corolla, and permanent: the corolla is formed of a ſingle petal: the tube is cylindric, of the length of the cup, and pervious: the limb is ſmall, and is divided into four oval, reflex ſegments: the ſtamina are four ſetaceous filaments, inſerted into the cup, and of the length of the tube of the flower: the antheræ are oblong, erect, compreſſed, obtuſe, and emarginated. The germen is quadragonal and ſhort: the ſtyle is ſetaceous, and much longer than the corolla: the ſtigma is obtuſe. The fruit is an obtuſe, quadrangular capſule, containing four cells, and opening at the corners; in each cell there are ſeveral roundiſh ſeeds: the antheræ, though emarginated, are not bicornate. Theſe characters are ſufficient, without the addition of a deſcription.

POLYPREMUM.

THE calyx is a perianthium, compoſed of four pointed leaves: the corolla is compoſed of a ſingle petal, and is of the rotated form, divided into four ſegments, which are broad, and obverſely cordated. This ſtructure of the corolla alone is ſo different from that of all the other plants of this claſs, that there need no farther characters.

EXACUM.

THE calyx is a perianthium, compoſed of four leaves: the corolla conſiſts of a ſingle petal, formed into a tube, of a ſomewhat globoſe figure, and divided at the extremity into four ſegments. The ſtamina are four ſlender filaments: the antheræ are ſhort: the germen is oval, and marked with two furrows: the ſtyle is ſlender; the ſtigma ſimple. The fruit is a capſule, opening at the top, marked with two deep furrows, and containing two cells.

Theſe characters are ſo obvious a diſtinction of the Exacum from all the other plants of this genus, as to render a farther deſcription unneceſſary.

BUDDLÆA.

THE calyx of the Buddlæa is a very ſmall, permanent perianthium; it is compoſed of one leaf, lightly divided into four ſegments, acute and erect. The corolla conſiſts of a ſingle petal, lightly divided into four oval, acute ſegments, and three times as large as the cup. The ſtamina are four very ſhort filaments, placed at the diviſions of the flower: the antheræ are ſimple, and very ſhort: the germen is oval: the ſtyle is ſimple, and of ſcarce half the length of the corolla: the ſtigma is obtuſe: the fruit is an oval, oblong capſule, marked with two furrows, and containing two cells. The ſeeds are very numerous, and very ſmall.

Of this genus there is but one known ſpecies; it is an American, deſcribed by Houſton.

PLANTAGO.

THE calyx of the Plantago is a perianthium, divided into four parts, erect, very ſhort, and permanent. The corolla conſiſts of a ſingle petal, and is of very ſhort duration: the tube is of a cylindraceo-globoſe figure: the limb is divided into four oval, acute ſegments: the ſtamina are four erect, capillary, and extremely long filaments: the antheræ are oblong, compreſſed, and incumbent. The germen of the piſtil is oval: the ſtyle is filiform, and ſcarce of half the length of the ſtamina: the ſtigma is ſimple. The fruit is a capſule of an oval figure, containing two cells, and opening longitudinally: the ſeeds are numerous, and very ſmall. The calyx in moſt ſpecies is equal, in ſome unequal.

This genus comprehends the Plantago, Coronopus, Pſyllium, Scoparia, and the Gramen junceum of ſome authors.

1. *Plantago foliis ovatis glabris.* **Common broad-leaved Plantain.**
The ſmooth and oval-leaved Plantain.

The root of this ſpecies is of the thickneſs of a man's finger, but ſhort, and, as it were, cut off, and is furniſhed with a great number of fibres: from this ariſe ſix or eight leaves, which are ſomewhat hairy at their firſt appearance, but afterwards ſmooth, broad, obtuſe, and marked with three ſtrong longitudinal ribs on each ſide of the principal or middle one. From the center of this cluſter riſe a number of ſtalks, round, moderately thick, ſucculent, and ſomewhat hairy, ten or twelve inches in height; the greater part of theſe is formed into the ſpike of flowers, which is ſlender and cylindric: the apices are purple.

This ſpecies is common every-where with us, by way-ſides. C. Bauhine calls it, Plantago latifolia vulgaris.

The beautiful Roſe Plantain is only a variety of this common ſpecies.

2. *Plantago foliis linearibus, pinnato-dentatis.* **Buck's-horn-Plantain.**
The linear and pinnato-dentated-leaved Plantain.

The root of this ſpecies is long, white, moderately thick, and of a ſweet and pleaſant taſte. From this ariſes a cluſter of leaves, ſpreading themſelves every way from the center, ſo as to appear radiated. They are four or five inches long, narrow, and divided at the edges into long and ſlender ſegments, giving ſome diſtant reſemblance of the figure of a ſtag's-horn: among theſe riſe ſeveral ſtalks, round, hairy, and four or five inches in length, often much more: at the top ſtands a long, ſlender ſpike, like that of the common Plantain.

This ſpecies is frequent with us on heaths, and in barren places. C. Bauhine calls it, Coronopus ſylveſtris hirſutior; others, ſimply, Coronopus.

3. *Plantago caule ramoſo, foliis dentatis, ſpicis nudis.*
The dentated-leaved, naked-ſpiked, branched Plantain. **Common Fleawort.**

The root of this ſpecies is long, ſlender, and white, and has a few fibres. From this riſes the ſtalk, which grows to a foot, or more, in height, and is round, ſolid, erect, hairy, and branched almoſt from the bottom to the top: at every joint of the ſtalk ſtand two leaves, long, narrow, and dentated on the edges, ſo as, in ſome meaſure, to reſemble thoſe of the coronopus, or buck's-horn Plantain. The tops of the branches are ſomewhat viſcid to the touch: from the alæ of the leaves there grow long pedicles, on the tops of which ſtand ſhort and thick ſpikes, compoſed of cluſters of little, whitiſh flowers, which are ſucceeded by beautiful, gloſſy, black ſeeds; which, thrown into boiling water, make a fine mucilage.

This ſpecies is not a native of England, but we have it in ſome of our gardens. C. Bauhine calls it, Pſyllium Dioſcoridis, vel Indicum, foliis crenatis. The ſeeds of this ſpecies are, or ought to be, uſed in the ſhops; thoſe of the great Pſyllium are uſually ſold in their place.

4. *Plantago ſcapo unifloro.* **Long-threadedRuſh-graſs.**
The ſingle-flowered Plantain.

The root of this little plant is compoſed of a great number of conſiderably long and thick fibres: from this riſe ſeveral oblong, narrow, thick, and ſucculent leaves; they are two or three inches in length, and ſcarce an eighth of an inch in breadth, and lie upon the earth in a radiated manner. From the center of theſe grow ſeveral ſtalks, often not half an inch high; each has on it's ſummit a ſingle flower, ſmall, and compreſſed, but with four very remarkably long ſtamina riſing from it.

This little plant is found in boggy places, in many parts of England; I met with it this year in Borough-fen near Peterborough. Tournefort calls it, Plantago paluſtris gramineo folio monanthos. Moriſon, and others, Gramen junceum minus capitulis longiſſimis filamentis donatis.

The other ſpecies of Plantain are very numerous; of the common Plantain kind the more ſingular are, 1. The broad-leaved, hoary Plantain. 2. The narrow-leaved Plantain. 3. The ſerrated, narrow-leaved Plantain. 4. The ſhrubby, narrow-leaved Plantain. 5. The hairy, bulbous Plantain. 6. The narrow-leaved, ſea Plantain. 7. The graſſy-leaved Plantain. 8. The hairy, ſea Plantain. Of the Pſyllium kind are, 1. The common great Pſyllium. 2. The great procumbent Pſyllium. 3. The little Pſyllium.

The leaves of the common Plantain are refrigerating and diuretic: the root of the Coronopus is eſculent: the ſeeds of the Pſyllium make a mucilage much uſed in fevers.

CENTUNCULUS.

THE calyx of the Centunculus is a perianthium, divided into four, acute, lanceolated ſegments, longer than the corolla, and permanent: the corolla conſiſts of a ſingle petal: the tube is inflated, and of a ſomewhat globular figure: the limb is plane, and is divided into four ſuboval ſegments: the ſtamina are four filaments, nearly of the length of the flower: the antheræ are ſimple: the germen is roundiſh, and placed within the tube of the corolla: the ſtyle is filiform, of the length of the corolla, and is permanent: the ſtigma is ſimple: the fruit is a globoſe capſule, containing only one cell, and opening horizontally: the ſeeds are roundiſh, very numerous, and very ſmall.

This genus comprehends only the plant called Anagallidaſtrum by Micheli, and Anagallidis ſpecies, by Vaillant, 4. f. 2.

CENTUNCULUS.

The root of this little plant is a ſlender, white fibre, divided into two or three ramifications toward the bottom, and furniſhed with a few capillaments. From this ariſe four or five ſtalks, round, two or three inches long, and procumbent: the leaves ſtand alternately, and at conſiderable diſtances; they are ſmall, ſhort, and ſomewhat broad, and pointed at the end: in the ala of every leaf ſtands a very minute, white flower, ſcarce viſible, and fading very ſoon; but in it's place there comes a capſule, round, and very large, for the bigneſs of the plant.

This little plant is a native of England, but is not common; I found it this year on Hounſlow-heath.

SANGUISORBA.

THE calyx of the Sanguiſorba is a perianthium, compoſed of two very ſhort leaves, placed oppoſite to one another, and ſoon falling off. The corolla is formed of a ſingle petal, plane, and divided into four parts; the ſegments are oval, obtuſe, and connected only by the extremities. The ſtamina are four filaments, of the length of the corolla, broader at the top than elſewhere: the antheræ are ſmall and roundiſh: the germen of the piſtil is quadrangular, and is ſituated between the calyx and corolla: the ſtyle is filiform, and very ſhort: the ſtigma is obtuſe: the fruit is a ſmall, bilocular capſule; the ſeeds are ſmall.

1. *Sanguiſorba ſpicis ovatis.* Great Burnet.
The oval-ſpiked Sanguiſorba.

The root of this ſpecies is thick, oblong, and of an acrid, bitteriſh taſte. From this riſe pinnated leaves, of ſix or eight inches in length, compoſed of a number of pinnæ, ſet in pairs, and reſembling the leaves of betony, but more deeply indented, ſmooth, and gloſſy: among theſe riſe ſeveral ſtalks, three feet high, round, ſtriated, not hairy, and hollow; on theſe ſtand leaves, like the radical ones, but ſmaller, alternately, and at conſiderable diſtances. At the tops of the branches ſtand the flowers, arranged into ſhort, oval ſpikes, of a brown colour.

This ſpecies is frequent in meadows, in ſome parts of England. C. Bauhine calls it, Pimpinella ſanguiſorba major; Haller, Pimpinella foliis oblonge cordatis, ſpica brevi.

2. *Sanguiſorba ſpicis oblongis.* American Burnet.
The oblong-ſpiked Sanguiſorba.

The root of this ſpecies is very large, oblong, and whitiſh: the radical leaves are a foot and half long, compoſed of a great number of large pinnæ, dentated at the edges, and of a cordated, oblong figure. The ſtalk grows to four feet high, and has leaves like the radical ones, but ſmaller, placed alternately on it: toward the top it ſends out many branches, and, at the top of each, ſtands a ſpike of flowers, two or three inches long, and of the thickneſs of a finger; the flowers are ſmall, and of a greeniſh-white.

This ſpecies is a native of North America, but we have it in our gardens. Cornutus calls it, Pimpinella maxima; Gerard, and others, Pimpinella Canadenſis, and Hortenſis maxima.

The other ſpecies of Sanguiſorba are, 1. The auriculated-leaved, tall Sanguiſorba. 2. The great, glomerated-headed Sanguiſorba. 3. The great, purple-ſpiked Sanguiſorba. 4. The agrimony-leaved Sanguiſorba. 5. The little, hairy Sanguiſorba. 6. The little, ſmooth Sanguiſorba. 7. The ever-green Sanguiſorba.

The great Sanguiſorba is celebrated as a cordial, or ſudorific, and aſtringent, but, though great cures are ſaid to have been performed by it, the preſent practice neglects it.

CISSUS.

CISSUS.

THE calyx is a plane perianthium: the corolla is compoſed of a ſingle petal, lightly divided into four ſegments at the edge: the ſtamina are four ſlender filaments: the antheræ are oblong, and tumid: the germen is roundiſh: the ſtyle is ſhort: the ſtigma ſimple. The fruit is a roundiſh berry, containing only a ſingle ſeed, and is lodged within the corolla.

Theſe characters are ſufficiently diſtinctive and obvious, without any farther deſcription.

Claſs the Fourth. Order the Firſt.

Diviſion the Fourth.

Tetandria Monogynia, with tetrapetalous compleat flowers.

EPIMEDIUM.

THE calyx of the Epimedium is a deciduous perianthium, compoſed of four oval, obtuſe, hollow, little leaves, placed immediately under the petals of the corolla, not alternately with them: the corolla conſiſts of four oval, obtuſe, hollow petals: the nectaria are four in number; they are formed like cups; their bottom is obtuſe; they are of the ſize of the petals, and are incumbent on them, and the edge of their opening is affixed to the cup: the ſtamina are four ſubulated filaments, compreſſing the ſtyle: the antheræ are oblong, erect, and bilocular, formed of two valves, and ſplitting longitudinally: the germen is oblong: the ſtyle is ſhorter, and is only of the length of the ſtamina: the ſtigma is ſimple: the fruit is an oblong pod, pointed at the end, formed of two valves, and having only one cell: the ſeeds are numerous, and of an oblong figure.

Of this genus there is only one known ſpecies.

Epimedium.
Barrenwort.

The root of the Epimedium is very long, ſlender, and creeping: the radical leaves ſtand on pedicles of five inches long, round, ſlender, and gloſſy; theſe divide at their top into three ramifications, and each of theſe is again divided into three; and, at the extremity of each of theſe laſt ramifications, ſtands a ſingle leaf, an inch, or more, in length, half an inch in breadth, of a pale green, auriculated, and pointed at the end; nine of theſe compoſe the compleat radical leaf: three or four of theſe uſually ariſe from the ſame part of the root, and among them a ſtalk, a foot, or ſomewhat more, in height, round, rigid, ſmooth, and furniſhed with one compound leaf about it's middle; above this it divides into three or four branches, and each ſuſtains five or ſix very beautiful purple flowers, with a mixture of yellow.

This elegant plant is a native of England: I have found it in ſome of the woods in Yorkſhire; it grows alſo abundantly in a wood near Thorndon in Eſſex, but this has probably been from roots thrown out of the late lord Petre's garden.

CORNUS.

THE calyx of the Cornus is double: the common involucrum is formed of four leaves, and contains ſeveral flowers, with their peduncles: the leaves it is compoſed of are coloured, of an oval figure, and deciduous; the two oppoſite ones are ſmaller than the others. The proper perianthium is alſo deciduous; it is very ſmall, and is placed on the germen; it is formed of a ſingle leaf, dentated in four places on the rim: the corolla conſiſts of four oblong, acute, plane petals, ſmaller than the involucrum: the ſtamina are four erect, ſubulated filaments, longer than the corolla: the antheræ are roundiſh and incumbent: the germen is roundiſh, and is placed beneath the receptacle: the ſtyle is filiform, and of the length of the corolla: the ſtigma is obtuſe. The fruit

is a roundiſh, umbilicated drupe: the nut within it is oblong, and umbilicated, and contains two cells, in each of which is a ſingle, oblong kernel.

This genus comprehends the Cornus of authors, and the Virga ſanguinea of Dillenius.

1. *Cornus umbellis involucrum æquantibus.* The Cornelian Cherry.
The Cornus, with the umbellæ equalling the involucrum.

This ſpecies grows to a large and tall tree, and is much branched. The bark is greyiſh, or reddiſh; the wood white, ſolid, and hard: the leaves are oblong and broad, ſmooth on the ſurface, even at the edges, and full of large ribs: at the extremity of the branches ſtand cluſters of flowers, ſmall, and diſpoſed in umbels: after theſe come fruits, reſembling an olive, but not ſo thick; they are green at firſt, and afterwards of a beautiful red, ſtaining the hands, when bruiſed; they are, at firſt, of an acerb taſte, but, when quite ripe, of an agreeable mixture of ſweet and acid. C. Bauhine calls this, Cornus hortenſis mas. J. Bauhine, Cornus ſativa ſeu domeſtica.

It is a native of Miſnia, Auſtria, and ſome other places; it ſucceeds very well in our gardens.

2. *Cornus umbellis involucro multoties longioribus.* The Female Cornell.
The Cornus, with umbels many times longer than the involucrum.

This ſpecies riſes to about four or five feet, and is not much branched. It's bark is of a dark brown; it's wood white, and very firm and ſolid: it's trunk ſeldom exceeds three quarters of an inch in diameter. The leaves are two inches long, an inch and a half broad, full of large veins, even at their edges, and they terminate in a point. The flowers are ſmall, and of a greeniſh-white; they ſtand in umbels at the tops of the branches, and are ſucceeded by oblong fruits, of the bigneſs of a pea, and of a green colour at firſt, but blackiſh, when ripe.

This ſpecies is frequent in our hedges. The bark of it's younger ſhoots is often red, as are alſo many of the leaves, in which caſe it makes a ſingular and beautiful figure. C. Bauhine calls this, Cornus fœmina; others, Virga ſanguinea.

The other ſpecies of Cornus are, 1. The great, yellow-fruited Cornell. 2. The white-fruited, ſhort-leaved Cornell. 3. The American Cornell, with corymboſe flowers, and a large, white perianthium: and, 4. The herbaceous Cornus, called by authors Chamæpericlymenum, or the Dwarf Honeyſuckle.

EUONYMUS.

THE calyx of the Euonymus is a plane perianthium, formed of one leaf, divided into four roundiſh and hollow ſegments: the corolla conſiſts of four plane, oval, patent petals, and is larger than the cup: the ſtamina are four erect, ſubulated filaments, ſhorter than the corolla, and inſerted on the germen; the antheræ are didymous: the germen is acuminated: the ſtyle is ſhort and ſimple: the ſtigma is obtuſe. The fruit is a ſucculent, coloured capſule, of a quadragonal figure, formed of four valves, terminating in as many points, and forming as many cells; the ſeeds are ſingle, of an oval figure, and covered with a calyptra.

There are ſometimes five ſtamina, petals, &c. and ſometimes no filaments but the points of the receptacle.

1. *Euonymus foliis oblongo-ovatis.* The Spindle-tree.
The oblongo-oval leaved Euonymus.

This is a ſhrub of ſix or eight feet high: the bark of the ſtem is brown, the wood white and firm, the root large and brachiated. The bark of the young ſhoots is green, and forms four ridges at nearly equal diſtances, ſo that they appear ſquare: the leaves are two inches long, of a bright green colour, moderately broad, and terminate in a point. The flowers are very ſmall and greeniſh; the fruit is a very elegant one, of the bigneſs of a ſmall nut, green at firſt, but of a beautiful ſcarlet, when ripe.

This

This ſpecies is frequent in our hedges. C. Bauhine calls it, Euonymus vulgaris granis rubentibus; others, Euonymus Theophraſti, and Tetragonia.

2. *Euonymus foliis lato-lanceolatis ſerratis*
The Euonymus, with broad, lanceolated, and ſerrated leaves.

Virginian Spindle-tree.

This is a moderately large and very beautiful tree. It's bark is ſmooth, brown on the trunk, and greeniſh on the branches: the leaves are of a beautiful green, ſmooth on the ſurface, and elegantly ſerrated at their edges: the flowers are very ſmall, and of a yellowiſh-green: the fruit is of the ſize of a large pea, of a beautiful red colour, and verrucoſe. It conſiſts of five capſules, not of four, as that of our Euonymus, and therefore is pentangular: the calyx alſo is divided into five ſegments, and the flower has five petals, and five ſtamina.

This ſpecies is a native of Virginia; it ſtands very well in our gardens. Plukenet calls it, Euonymus Virginianus pyracanthæ foliis, capſula verrucarum inſtar exaſperata rubente. Gronovius, Euonymus foliis lanceolatis.

The other ſpecies of Euonymus are, 1. The red-flowered Enonymus, with black fruit. 2. The broad-leaved Euonymus. 3. The African Euonymus, with lucid, ſerrated leaves; and, 4. The broad-leaved, American Euonymus, with cluſtered, pentagonal, black fruit.

TOMEX.

THE calyx is a perianthium, formed of a ſingle leaf, of a cylindric ſhape, and divided into four ſhort ſegments at the edge; the corolla conſiſts of four petals; the ſtamina are four very long filaments: the antheræ are ſmall; the germen is roundiſh, the ſtyle is long and ſlender, and the ſtigma is emarginated. Theſe characters are ſo diſtinctive and obvious, that no farther deſcription is neceſſary.

PTELEA.

THE calyx of the Ptelea is a ſmall perianthium, divided into four parts. The corolla conſiſts of four petals, of an ovato-lanceolate figure, plane, patent, and larger than the cup: the ſtamina are four ſubulated filaments; the antheræ are roundiſh: the germen is orbiculated and compreſſed; the ſtyle is ſhort; the ſtigmata are two, and are acute. The fruit is a roundiſh, perpendicular membrane, having a cavity in it's center for the ſeed, which is ſingle, and of a cylindric figure.

The fruit of the Ptelea is extreamly like that of the elm, but all the other parts of the fructification are different. The ſtamina, ſegments of the cup, &c. are ſometimes five inſtead of four.

Of this genus there is only one known ſpecies, called, Frutex ulmi facie, by Dillenius and others. The characters render a deſcription unneceſſary.

LUDWIGIA.

THE calyx of the Ludwigia is a permanent perianthium, ſituate on the germen, and formed of a ſingle leaf, divided into four lanceolated ſegments, patent, and of the length of the corolla: the corolla conſiſts of four plane, patent, equal petals, of an obverſely, cordated figure: the ſtamina are four ſhort, erect, ſubulated filaments: the antheræ are ſimple, oblong, and erect: the germen is tetragonal, and cloathed with the baſe of the cup: the ſtyle is cylindric, and of the length of the ſtamina: the ſtigma is obſcurely tetragonal and capitated: the fruit is a quadragonal, obtuſe capſule, ſurrounded by the cup, and coronated with it at the extremity; it contains four cells, and opens in four places at once: the ſeeds are numerous and ſmall.

Ludwigia

Ludwigia capſulis cubicis apice perforatis.
The Ludwigia, with cubic capſules perforated at the baſe.

Virginian yellow Willow-herb.

This plant grows to a foot high: the ſtalk is erect, firm, and branched: the leaves ſtand alternately, and are of a lanceolated figure, and undivided at their edges: the flowers ſtand ſingly down the ſides of the upper part of the ſtalks; they are large, and of a beautiful yellow: the root is compoſed of a multitude of fibres: the capſule is ſhorter than the cup, ſmooth, of a cubic figure, and perforated at the extremity.

It is a native of Virginia, but ſtands very well in our gardens. Plukenet calls it, Lyſimachia non pappoſa, flore luteo majore, ſiliqua caryophylloide minore ex Virginia.

OLDENLANDIA.

THE calyx of the Oldenlandia is a permanent perianthium, placed upon the germen, and formed of a ſingle leaf, divided into four ſubulated ſegments. The corolla conſiſts of four oval petals, patent, and twice as long as the ſegments of the cup: the ſtamina are four ſimple filaments: the antheræ are ſmall: the germen is roundiſh, and placed under the cup: the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is emarginated. The fruit is a coriaceous globular capſule, containing two cells: the ſeeds are numerous, and very ſmall.

There is but one known ſpecies of this genus. It is an American, deſcribed by Plumier.

AMMANIA.

THE calyx of the Ammania is a permanent perianthium, of a campanulated figure, oblong, erect, quadrangular, marked with eight ſtriæ and plicæ, and divided into eight denticular ſegments, at the extremity the alternate ones. The corolla, when not wanting, conſiſts of four petals inſerted into the calyx, placed vertically and patent: the ſtamina are four ſetaceous filaments, of the length of the calyx, and inſerted into it: the antheræ are didymous: the germen is large, and of a ſomewhat oval figure: the ſtyle is ſimple, and very ſhort; the ſtigma is capitated. The fruit is a roundiſh capſule, ſurrounded by the cup, and containing four cells: the ſeeds are numerous and ſmall. Houſton figures the four petals from his American plants; they are wanting in thoſe which flower with us.

Ammania foliis ſemiamplexicaulibus.
The Ammania, with leaves almoſt ſurrounding the ſtalks.

This is a ſhrubby plant: it grows to a foot, or two, in height; it's ſtem is woody, the bark brown and ſmooth: the leaves ſtand two at a joint, oppoſite one to another. They are an inch and a half long, and not more than an eighth of an inch broad at the baſe, where they are broadeſt, and ſurround part of the ſtalk; from thence they grow narrower all the way, till they terminate in a point; they are hollowed, ſmooth, and even at the edges. The flowers ſtand in the alæ of the leaves: the fruit in the cup, when full grown, is of the ſize of a pea: the root is formed of a number of woody fibres.

This is a native of Barbadoes, and the neighbouring iſlands. Sir Hans Sloane, Ray, &c. call it, Aparines folio vaſculo ſeminali rotundo, ſeminibus minutiſſimis.

TRAPA.

THE calyx of the Trapa is a permanent perianthium, formed of one leaf, and divided into four acute ſegments. The corolla conſiſts of four petals, vertically ovated, and larger than the cup: the ſtamina are four filaments, of the length of the cup: the antheræ are ſimple: the germen is oval; the ſtyle is ſimple, and of the length of the cup; the ſtigma is capitated and emarginated. The fruit is a hard oſſeous capſule, of an oblong, oval figure, containing only one cell, and armed with four ſharp, thick

thick ſpines, placed oppoſitely in the middle of the ſides, and patent; theſe were before the leaves of the calyx: the ſeed is a ſingle, covered nucleus, of an oval figure.

There ſeem to be four other ſteril ſtamina, beſide the four which have antheræ on them.

There is only one known ſpecies of this genus, which is deſcribed by authors under the name of Tribulus Aquaticus, and Tribuloides.

TRAPA. Water Caltrop.

The root of this ſingular plant is compoſed of a great number of oblong, ſlender bodies, partly ſwimming in the water, partly immerſed in the mud at the bottom, and from different parts of theſe there grow ſeveral tufts of fibres, ſhort and ſlender. From this there riſe a number of leaves, in ſome degree reſembling thoſe of the poplar, an inch and half long, ſmooth on the upper ſide, rugoſe underneath, and ſtanding on pedicles four or five inches long, hollow or fungous, and having a tuberoſity a little above their inſertion. The flowers grow on ſeparate pedicles; they are ſmall and white; the fruit is of the bigneſs of a ſmall walnut; the kernel eſculent.

It is frequent in many parts of Europe in ſtanding waters, with muddy bottoms; but it is not a native of England. C. Bauhine calls it, Tribulus aquaticus. Tournefort, Tribuloides vulgaris aquis innatans.

Claſs the Fourth. Order the Firſt.

Diviſion the Fifth.

Tetrandria Monogynia, with tetrapetalous, incompleat flowers.

DORSTENIA.

THE calyx of the Dorſtenia is double; the common involucrum is very large, plane, angulated, and covered with a common receptacle, which grows to it, and with very numerous and very ſmall flowers growing on it's diſk. The proper perianthium is quadrangular and hollow; it is immerſed in the receptacle, and grows to it. There is no corolla: the ſtamina are four very ſmall, filiform filaments; the antheræ are roundiſh: the germen is roundiſh; the ſtyle is ſimple, and the ſtigma obtuſe. There is no fruit; but the common receptacle becomes thick and fleſhy: the ſeeds are ſingle, roundiſh, and acuminated.

Of this genus there is only one known ſpecies; but, that from the variation of the leaves and receptacle in their different periods of growth, has been deſcribed under two names, as if two ſpecies.

DORSTENIA. The Contrayerva Plant.

The root of the Dorſtenia is oblong, of the thickneſs of a man's little finger, of an irregularly protuberant ſurface, and of a reddiſh-brown colour on the outſide, and white within. It's texture is fibrous; it's taſte extreamly acrid; it deſcends obliquely into the ground, and is furniſhed with a great number of large fibres. From this riſe five or ſix leaves, each on it's ſeparate pedicle: the pedicles are five inches long, round, and reddiſh; the leaves at firſt are of a kind of triangular figure, and only undulated at the edges; but afterwards they become more and more deeply ſinuated, till at length they reſemble thoſe of the common Sphondylium: they are four or five inches long, and nearly as much in breadth. Among theſe riſe ſeveral pedicles, ſix or ſeven inches high, ſupporting each one common involucrum, with it's receptacle, and a multitude of flowers. The ſhape of this common involucrum varies alſo, as it is more or leſs mature; and is at ſome periods roundiſh, at others angular. It is very thick and fleſhy, when mature, and the ſeeds are white.

This plant is a native of South America. Houſton deſcribes it twice, under it's two ſtates of maturity, under the names of Dorſtenia dentariæ radice, ſphondylii folio, placenta ovali, and Dorſtenia dentariæ radice, folio minus laciniato, placenta quadrangulari et undulata. It's root is the Radix Contrayervæ of the ſhops. It is a noble ſudorific and alexipharmic. It ſtrengthens the ſtomach, diſſipates flatulencies, and is excellent, in the form of the lapis contrayerva of the ſhops, in fevers; and as a ſtomachic, infuſed in wine, in ſmall quantities.

ISNARDA.

The calyx of the Iſnarda is a campanulated perianthium, lightly divided into four acute, patent ſegments. There is no corolla: the ſtamina are four filaments, growing out of the middle of the cup; the antheræ are ſimple. The germen is lodged within the ſubſtance of the cup; the ſtyle is ſimple, and longer than the ſtamina; the ſtigma is thick: the fruit is formed of the ſquare baſe of the cup; it has four cells, and in them a few ſeeds of an oblong figure.

This genus comprehends the Dantia of Petit, and the glaucis, ſpecies 84. of Boccone. The characters render a farther deſcription unneceſſary.

ELÆAGNUS.

THE calyx of the Elæagnus is a perianthium, conſiſting of a ſingle leaf, very lightly divided into four ſegments, ſtrait, campanulated, ſcabrous on the outſide, coloured within, and deciduous: there is no corolla. The ſtamina are four very ſhort filaments, inſerted below the diviſures of the calyx: the antheræ are oblong, and incumbent: the germen is roundiſh, and placed below the receptacle: the ſtyle is ſimple, and a little ſhorter than the cup: the ſtigma is ſimple. The fruit is a drupe of an oval figure, obtuſe, ſmooth, and punctated at the top, in which is an oblong, obtuſe kernel.

Elæagnus foliis lanceolatis.
The lanceolated-leaved Elæagnus.

The root of this tree ſpreads a great way under the ſurface, and is formed of long and thick ramifications. The tree grows to fifteen or twenty feet high, and ſpreads it's branches every way to a conſiderable extent: the bark is whitiſh, rough, and cracked on the trunk; ſmooth, and often downy, on the young ſhoots. The leaves are an inch and half long, three quarters of an inch broad, and all over white, eſpecially on the under ſide; they adhere to ſhort pedicles, and ſtand irregularly on the branches; they are pointed at the ends, and ſoft to the touch. The flowers ſtand in the alæ of the leaves; they are ſmall and white; the fruit is like an olive, only ſmaller; it's pulpy part fungous, but well taſted.

This tree is common in Syria and Cappadocia, as alſo in Bohemia and Spain. C. Bauhine calls it, Olea ſylveſtris folio molli incano. Dodonæus, Zizyphus Cappadocica.

BRABEJUM.

THE Brabejum has no calyx. The corolla conſiſts of four linear, obtuſe petals, in their lower part erect, and forming a kind of tube; in the upper turned backward. The ſtamina are four capillary filaments, inſerted in the ungues of the petals, and ſcarce ſo long as the corolla: the antheræ are ſmall, and ſplit ſideways: the germen is very ſmall and hairy; the ſtyle is filiform, of the length of the ſtamina, and ſomewhat thicker above than below; the ſtigma is ſimple. The fruit is a drupe of the drier kind, of an oval figure, and hairy; the kernel is oval.

There is but one known ſpecies of this genus. It is figured by Breynius in his Cent. f. 1. The characters are ſufficient, without any farther diſtinction.

CAMPHOROSMA.

THE calyx of the Camphoroſma is formed of a ſingle leaf, and is of a hollowed, bellied, and urceolar figure, with two oppoſite and alternate, very ſmall teeth. The corolla is incompleat; the ſtamina are four ſlender filaments; the antheræ are roundiſh; the germen is oval; the ſtyle is ſhort, and the ſtigma capitated. The fruit is a ſmall capſule, containing only a ſingle ſeed.

The ſhape of the calyx in this plant, and the capſule containing but one ſeed, ſufficiently diſtinguiſh it from all the others of this claſs.

RIVINA.

THE calyx of the Rivina is a permanent perianthium, coloured and divided into four parts: the ſegments are of an oblong, oval figure, and obtuſe: there is no corolla. The ſtamina are four filaments, ſhorter than the cup, and permanent: the

anthera

anthera is ſmall: the germen is large and roundiſh; the ſtyle is very ſhort: the ſtigma is ſimple and obtuſe. The fruit is a globoſe berry, containing only one cell, and ſtanding on a green, reflex cup: the ſeed is ſingle, roundiſh, compreſſed, and ſcabrous.

This genus comprehends the Rivina of Plumier, the Solanoides of Tournefort, and the Phytolacæ ſpecies of Boerhaave. Plumier very erroneouſly figures eight ſtamina in the flower. There is only one known ſpecies of it.

RIVINA.

The Rivina is a very luxuriant tree, puſhing out a vaſt number of long branches: it's root is formed of a number of long ramifications. It's ſtem covered with a pale, brown bark; it's ſmaller branches with a green one. It's leaves remain freſh all the winter; they are oblong, broad, and pointed at the end, two inches, or more, in length, and near an inch and half in diameter, hoary and ſoft to the touch. The flowers are coloured, though there is no corolla: the berries, when ripe, afford a rich purple juice, that ſtains every thing it touches.

The tree is a native of Barbadoes, Jamaica, and many other of the iſlands thereabout. Tournefort calls it, Solanoides Americana, circææ foliis caneſcentibus. Commelin, Amaranthus baccifer circææ foliis.

SALVADERA.

THE calyx is a perianthium, formed of a ſingle leaf, divided into four revolute ſegments; there is no corolla. The ſtamina are four filaments, of the length of the cup: the antheræ are roundiſh, and furrowed, reſembling, in ſome degree, a purſe. The germen is round; the ſtyle is ſimple and ſhort; the ſtigma is obtuſe and umbilicated: the fruit is a round berry, containing only one cell, in which is incloſed a ſingle, round ſeed, incloſed in a ſpotted, callous ſkin.

There is but one known ſpecies of this genus.

SALVADERA.

The root is divaricated and ſpreading, the trunk woody; the bark is of a greyiſh brown, and full of cracks. It ſometimes grows to the ſize of a moderately large tree, but more uſually it is a ſhrub of eight or ten feet high: the leaves ſtand uſually in pairs; they are oblong and lanceolated, two inches in length, and about an inch in breadth; they are of a bright green, and often ſpotted with black. The flowers ſtand in cluſters, and are of a pale, yellowiſh colour.

It is a native of the Eaſt. The ſhores of the Perſic gulph abound with it. The natives uſe it's leaves, as a remedy, for the bite of the ſcorpion.

ALCHEMILLA.

THE calyx of the Alchemilla is a permanent perianthium, formed of one leaf, ſubulated and divided at the extremity into eight ſegments, alternately larger and ſmaller: there is no corolla. The ſtamina are four very ſmall, erect, ſubulated filaments, inſerted in the rim of the cup: the antheræ are roundiſh; the germen is oval; the ſtyle is filiform, and of the length of the ſtamina; it is inſerted at the baſe of the germen: the ſtigma is globoſe. There is no fruit: but the neck of the calyx ſhuts, and it contains a ſingle ſeed of an elliptic figure, and ſomewhat compreſſed.

1. *Alchemilla foliis palmatis.* Common Ladies Mantle.

The palmated-leaved Alchemilla.

The root of this ſpecies is oblong, of the thickneſs of one's little finger, and furniſhed with a number of fibres; of an aſtringent and acerb taſte. The radical leaves ſtand on pedicles of two or three inches long; they are of a ſomewhat roundiſh figure, but ſinuated, deeply plicated, and of a pale yellowiſh-green colour, and an inch and half in diameter. The ſtalks are eight or ten inches long, round, thick, but not erect: the leaves on theſe are like the radical ones, but ſmaller, and with very ſhort pedicles. The flowers are ſmall, and ſtand in a kind of umbels; they are of a greeniſh-yellow.

This is a native of England; I found it this ſummer in ſome low grounds in Lincolnſhire. C. Bauhine calls it, Alchemilla major vulgaris. Linnæus, Alchemilla foliis ſimplicibus. As it grows in more wet, or more dry, places, it's leaves are more or leſs hairy.

2. *Al-*

2. *Alchemilla foliis digitatis.* **Cinquefoil Ladies Mantle.**
Digitated-leaved Alchemilla.

The root of this elegant little plant is oblong, ſlender, blackiſh, and furniſhed with many fibres. The radical leaves ſtand on pedicles of three inches long; they are half an inch in diameter, and are divided, down to the pedicle, into five parts, and theſe ſerrated at their edges: they are of a bright green on the upper ſide, and of a ſilvery white underneath. The ſtalks are four or five inches long, round, whitiſh, and procumbent; on theſe ſtand leaves like the radical ones, but ſmaller, formed of fewer ſegments, and without thoſe long pedicles, and at their tops ſtand cluſters of little greeniſh-white flowers.

This is a native of England, but is a very ſcarce plant with us. I have met with it on the hills in the northern counties. Ray calls it, Alchemilla Alpina pentaphyllæa. C. Bauhine, Tormentilla Alpina folio ſericeo; and Tournefort, Alchemilla quinquefolia folio ſubtus argenteo.

The other ſpecies of Alchemilla are, 1. The cinquefoil Alchemilla, with fimbriated lobes. 2. The narrow-leaved, erect Alchemilla. 3. The narrow-leaved, procumbent Alchemilla.

Claſs the Fourth Order the Second.

TERANDRIA DIGYNIA.

Plants which have four ſtamina and two ſtyles in each flower.

APHANES.

THE calyx of the Aphanes is a permanent perianthium of a tubulated figure, conſiſting of a ſingle leaf, divided into eight ſegments at the edge, and thoſe alternately larger and ſmaller: there is no corolla. The ſtamina are four erect, ſubulated filaments; they are very ſmall, and are inſerted in the rim of the calyx: the antheræ are roundiſh. The germina are two, and of an oval figure: the ſtyles are capillary, of the length of the ſtamina, and inſerted into the germina at the baſe: the ſtigmata are capitated. There is no fruit, but the calyx cloſes at the mouth, and contains two oval, acuminated ſeeds, compreſſed, and of the length of the ſtyle.

This genus approaches greatly to the Alchemilla, but is evidently diſtinct in the piſtil. There is only one known ſpecies of it.

APHANES. **Parſley Piert.**

The root of this little plant is oblong, ſmall, and ſimple, and furniſhed with ſeveral fibres. The ſtalks riſe five or ſix together; they are three inches long, round, hairy, and procumbent: the leaves ſtand very thick upon them; they are roundiſh, but divided, as it were, into three parts, and thoſe deeply ſerrated at their edges. All along the branches ſtand cluſters of ſmall, greeniſh-white flowers, arranged into a double ſeries. The whole plant is of a greyiſh, or whitiſh-green, colour.

It is extreamly common in our corn-fields. Dillenius and others call it, Percepier Anglorum. Columna, Alchemilla Alpina minor; and C. Bauhine, Chærophyllo nonnihil accedens.

HAMAMELIS.

THE calyx of the Hamamelis is an erect perianthium, conſiſting of four equal, oblong, and obtuſe leaves. The corolla conſiſts of four linear, equal, and very long petals: the ſtamina are four ſubulated filaments, of the length of the calyx; the antheræ are ſimple: the germen is oval and hairy. The ſtyles are two in number, and of the length of the ſtamina: the ſtigmata are ſimple. The fruit is a bivalve capſule, containing two cells: the ſeed is a ſingle nucleus, of an oblong, oval figure, and ſmooth ſurface.

This is an American, deſcribed by Gronovius in his Flora Virginica. The characters ſufficiently diſtinguiſh it, without a farther deſcription.

CUS-

CUSCUTA.

THE calyx of the Cuſcuta is a perianthium, formed of one leaf, of a cyathiform figure, obtuſe, lightly divided into four ſegments, and fleſhy at the baſe. The corolla conſiſts of a ſingle petal, of an oval figure, a little longer than the cup, and divided lightly into four obtuſe ſegments at the mouth: the ſtamina are four ſubulated filaments, of the length of the cup; the antheræ are roundiſh; the germen of the piſtil is roundiſh; the ſtyles are two, erect and ſhort; the ſtigmata are ſimple; the pericarpium is roundiſh, fleſhy, and formed into two cells, opening horizontally; the ſeeds are two in number.

This genus comprehends the Cuſcuta of authors, and the Baſella of the Hortus Malabaricus; the Baſella, indeed, produces a ſingle ſeed, naked, and placed in a ſucculent, baccated calyx; the flower is ſometimes divided into ſix ſegments, and the ſtyle in that caſe is triple.

1. *Cuſcuta nuda repens filiformis.*
The filiform, naked, creeping Cuſcuta. **Dodder.**

The root of this ſingular plant conſiſts of a number of ſhort fibres: from this riſe ſeveral naked, round, reddiſh ſtalks, which twiſt themſelves about any plant that is near them: as ſoon as theſe are well faſtened to the plant, the root in the earth dies away, and the whole plant is afterwards fed by the juices of that it has ſeized upon; theſe ſtalks continue always naked of leaves; but they ſend out, at different parts, cluſters of fibres, which pierce the bark of the other plant, and thence take in their nouriſhment. The flowers ſtand in cluſters, on ſeveral parts of the ſtalks; they are hollow, ſmall, and of a pale reddiſh, or whitiſh, colour.

This plant is common in England, and in all other parts of Europe, and has been called by different names, according to the different plants it has been found about, as Epurtica, Eperica, and Epithymum; the laſt is ſtill, by many, ſuppoſed a diſtinct ſpecies, but erroneouſly.

The Cuſcuta has been celebrated as a cathartic, but it is a very languid one, and is now out of uſe.

HYPECOUM.

THE calyx of the Hypecoum is a ſmall perianthium, formed of two leaves, which are of an oval, acute figure, and ſtand erect, and oppoſite to one another, and are deciduous. The corolla conſiſts of four petals; the two exterior petals are broad, trilobated, and obtuſe, and are placed overagainſt one another; the two interior ones ſtand alternately with the others: they are lightly divided into three ſegments, of which the middle one is hollow, compreſſed, and erect. The ſtamina are four erect, ſubulated filaments, covered by the ſegments of the two inner petals: the antheræ are erect and oblong: the germen is oblong and cylindric: the ſtyles are two, and are very ſhort: the ſtigmata are acute. The fruit is a long, compreſſed pod: the ſeeds are of a roundiſh figure, but compreſſed, and are placed ſingly in the articulations of the pod.

1. *Hypecoum ſiliquis arcuatis, compreſſis, articulatis.*
The Hypecoum, with crooked, compreſſed, articulated pods.

The root is oblong and ſlender, ſometimes bifid, ſometimes ſimple, and of a yelloviſh-brown colour: the radical leaves ſtand on moderately long pedicles; they are variouſly divided, and, in ſome degree, reſemble thoſe of the fumaria: the ſtalks are procumbent, and ſomewhat compreſſed, and run up naked a great way, but, toward the top, where the flowers appear, they have leaves, like the radical ones, but ſmaller, and without thoſe long pedicles. The flowers are ſmall and yellow: the pods are long, and bent like a ſickle: the ſeed is black.

This is not a native of England, but it is common in moſt other parts of Europe. C. Bauhine calls it, Hypecoum; J. Bauhine, Hypecoon ſiliquoſum; others, Cuminum ſiliquoſum.

2. *Hypecoum ſiliquis pendulis, teretibus, equalibus.*
The Hypecoum, with cylindric, equal, pendulous pods.

The root of this ſpecies is oblong and ſlender: the radical leaves are ſupported on pedicles of two inches long, and reſemble thoſe of the carui plant: the ſtalks are five

or ſix inches high, and, though very ſlender, they ſtand erect; they have leaves on them, like the radical ones, but leſs divided, and on ſhort pedicles. The flowers are moderately large, and yellow: the pods are ſtrait, and hang downwards, on rigid pedicles.

This is a native of many parts of Germany, and Italy. Tournefort calls it, Hypecoon tenuiore folio; Dalechamp, Cuminum ſilveſtre ſiliquatum Ponæ.

3. *Hypecoum ſiliquis erectis, teretibus, toruloſis.*
The Hypecoum, with erect, rounded, torulated pods.

The root of this ſpecies is oblong, ſlender, and whitiſh: the radical leaves ſtand on long pedicles, and are very finely divided: the ſtalks are round and ſmooth: the leaves on them are very fine and ſmall; the flowers are yellow, and nearly of the breadth of a ſhilling: the pods ſtand on ſhort, rigid pedicles, and are erect, rounded, and knotty, each protuberance containing a ſingle, yellow ſeed.

This is a native of Ruſſia. Amman calls it, Hypecoum tenuifolium ſiliquis erectis teretibus.

Claſs the Fourth. Order the Third.

TETRANDRIA TETRAGYNIA.

Plants which have in each flower four ſtamina and four ſtyles.

ILEX.

THE calyx of the Ilex is a very ſmall, permanent perianthium, divided into four ſegments at the verge: the corolla conſiſts of a ſingle, plane petal, divided into four large, roundiſh, hollow, patent ſegments, cohering only at the ungues: the ſtamina are four ſubulated filaments, ſhorter than the corolla: the antheræ are ſmall; the germen is roundiſh: there is no ſtyle, but there are four roundiſh ſtigmata: the fruit is a roundiſh berry, containing four cells: the ſeeds are ſingle, oſſeous, oblong, and obtuſe, gibbous on one ſide, and angulated on the other.

This genus comprehends the Aquifolium of Tournefort, and the Dodonæa of Plumier, only the Dodonæa excludes a fourth part of the number in all the parts of fructification. The tree, commonly called Ilex, is of the oak kind, and has no place here, nor any right to a generical name diſtinct from Quercus.

Ilex foliis ovatis, acutis, ſpinoſis. **Common Holly.**
The Ilex, with oval-pointed, prickly leaves.

The common Holly is an ever-green ſhrub, uſually riſing to eight or ten feet high, ſometimes growing to a tree. The branches are very flexile and tough; the bark is greyiſh on the trunk, and greeniſh on the branches; the leaves are of an oblong, oval figure, prickly at the points, and about the edges: the flowers are ſmall, and of a greyiſh-white; the berries, which ſucceed them, are green at firſt, but red, when ripe.

The Holly is a native of England, and almoſt all other parts of Europe. C. Bauhine calls it, Ilex aculeata baccifera folio ſinuato; others, Agrifolium, and Aquifolium vulgare. Tournefort mentions what he calls ten ſpecies of Holly, but they are only varieties of this common kind, with variegated leaves, and other variations, owing to accident or to culture.

RUPPIA.

THE calyx of the Ruppia conſiſts of a ſmall and thin ſpatha, ſcarcely diſtinguiſhable from the vagina of the leaves: the ſpadix is ſubulated, ſtrait, ſimple, and, when the fruit is ripe, becomes crooked, and is furniſhed with fructifications, placed in a double ſeries. There is no corolla, nor any filaments, but a number of ſeſſile antheræ, of a kidney-like ſhape, bivalve, and fixed longitudinally: the piſtil conſiſts of four thin, capillary ſtyles, each having an oval germen, and a ſimple ſtigma: the fruit conſiſts of four oval, cortical ſubſtances, pointed, oblique, ſtanding on the elongated ſtyles, and in each is contained a ſingle, roundiſh ſeed.

This very ſingular genus comprehends, ſo far as is yet known, only one ſpecies.

RUPPIA.

The Ruppia is an aquatic plant. It's root is long and creeping, of the thickneſs of a crow-quill, and jointed; the joints are about a third of an inch diſtant, and at every one it ſends down a fibre into the mud, and a ſtalk upwards in the water: the ſtalk is ſingle, round, and ſlender: the leaves ſtand alternately; they are three inches long, very narrow, and graſſy; large and hollow at the baſe, where they ſurround the ſtalk, and, more or leſs, ſharp at the point. The plant riſes to ſix or eight inches high; the leaves ſtand at an inch and a half diſtance: from the alæ of every leaf there grows a branch, furniſhed with two or three other ſuch leaves, and with the fructifications: the ſtyles ſupporting the germen are near an inch long.

It loves ſalt-water ditches. I have met with it on Canvey Iſland in Eſſex, and Sheppey in Kent. Ray calls it, Potamogeiton maritimum puſillum; C. Bauhine, Fucus fœniculi folio longiore; and Gramen maritimum fluitans cornutum. Plukenet, Potamogeiton fructu fere umbellato; Micheli, Bucca ferrea.

POTAMOGETON.

THE Potamogeton has no calyx: the corolla conſiſts of four roundiſh, obtuſe, hollow, patent, and unguiculated petals: the ſtamina are four very ſhort, plane, obtuſe filaments: the antheræ are ſhort, and didymous: the germina are four, and of an oval, acuminated figure: there are no ſtyles: the ſtigmata are obtuſe: there is no pericarpium: the ſeeds are four in number, roundiſh, and acuminated, gibbous on one ſide, and compreſſed and angulated on the other.

1. *Potamogeton foliis oblongo-ovatis, petiolis natantibus.* **Broad-leaved Pond-Weed.**
The oblong, oval-leaved Potamogeton.

The root of this is long and creeping, of the thickneſs of a quill, white, and jointed; from every joint there deſcend fibres into the mud, and ſtalks riſe upwards; theſe ſtalks are very long, round, jointed, branched, and extend themſelves to the ſurface of the water; at every joint of the ſtalk ſtands a leaf; thoſe immerſed in the water are narrow and graſſy; thoſe which float on the ſurface are broad, oblong, and oval, of a browniſh-green colour, and ſomewhat like the leaves of plantain, but broadeſt at the baſe, and terminating in an obtuſe point; theſe ſtand on pedicles of four or five inches long: at that part of the ſtalk from whence the ſpike of flowers grows, there are two leaves, placed oppoſite, and, at the origin of each, is a thin, pellucid membrane, of a pointed figure; this ſtands within the alæ of the pedicle, and ſurrounds the ſpike, while young: the ſpike, when full grown, is two or three inches long: the flowers are ſmall and yellowiſh.

This is very frequent in our ponds and ditches. C. Bauhine calls it, Potamogeton rotundifolium; J. Bauhine, Potamogeiton rotundiore folio; others, Fontalis major vulgaris.

2. *Potamogeton foliis cordatis amplexicaulibus.* **Perfoliate Pond-Weed.**
The Potamogeton, with cordated leaves ſurrounding the ſtalk.

The root is long, creeping, white, and jointed: the ſtalk is round, tender, and often three or four feet long: the leaves ſtand alternately; they are broad at the baſe, and ſurround the ſtalk; from thence they gradually grow ſmaller to the point; they are thin, pellucid, and of a ſhining ſurface, and are ribbed longitudinally, as thoſe of the plantain are: where the ſpike of flowers is inſerted, there are two leaves, placed oppoſite to one another: the ſpike is ſhort, and is ſupported on a thick pedicle, an inch and a half long: the flowers are ſmall and yellowiſh.

This is common in ponds, where it uſually makes it's way up to the ſurface. Ray calls it, Potamogeton perfoliatum; C. Bauhine, Potamogeiton foliis latis ſplendentibus.

3. *Potamogeton*

3. *Potamogeton foliis linearibus obtusis, caule compresso.*
Grassy, obtuse-leaved Potamogeton, with flat stalks.

The root of this species is composed of a cluster of fibres: the stalk grows to two or three feet in length, immersed all the way in water: it sends out many branches, and is slender, and somewhat compressed; at every joint stands a leaf, grassy, long, and thin, but terminating obtusely, not in a point; each leaf has three longitudinal ribs, and also a pellucid, thin membrane at it's base: the leaves stand alternately, except, where the spikes of flowers are inserted, there they stand opposite: the spike is short, the flowers small and greenish, but with a little redness towards the center.

This is common in our rivers. Ray calls it, Potamogeiton caule compresso, folio graminis canini.

The other species of the Potamogeton are, 1. The long and broad, acute-leaved Potamogeton. 2. The long, serrated-leaved Potamogeton. 3. The branched, narrow-leaved Potamogeton. 4. The narrow, undulated-leaved Potamogeton. 5. The many-leaved, grassy Potamogeton. 6. The little, round-stalked, grassy-leaved Potamogeton. 7. The curled-leaved Potamogeton. 8. The narrow, undulated-leaved Potamogeton.

SAGINA.

THE calyx of the Sagina is a perianthium, composed of four oval, hollow, patent, and permanent leaves: the corolla consists of four oval, obtuse, patent petals, shorter than the calyx: the stamina are four capillary filaments: the antheræ are roundish; the germen is globose; the styles are four, subulated, bent backward, and hoary: the stigmata are simple: the fruit is an oval, covered capsule, formed of four valves, and contains four cells: the seeds are numerous, very small, and affixed to the receptacle.

This genus comprehends the Alsinella of Dillenius, and some of the Alsines of other authors.

1. *Sagina scapis unifloris.* **Smooth, spring Chickweed.**
The Sagina, with one flower on the stalk.

The root of this beautiful little plant is composed of a tuft of white, short, and slender fibres: from this rise six or eight leaves, a quarter of an inch long, not half so much in breadth, broadest at the base, terminating in a point, smooth and glossy on the surface, and even at the edges: among these rises a stalk, two or three inches high, slender, round, and smooth; at every joint of this stand two leaves, like the radical ones, and without pedicles; at the top stands a single flower, large in proportion to the plant, and very beautiful, of a snow white.

This is frequent in spring in Hyde-park, and on Black-heath, &c. Magnol, and others, call it Alsine verna glabra.

2. *Sagina ramis procumbentibus.*
The procumbent-branched Sagina.

The root of this species is composed of a few, white, capillary fibres: the radical leaves are half an inch long, very narrow, smooth on the surface, and are disposed in a radiated form on the ground. The stalks grow to four or five inches long; they are very slender, procumbent, and jointed; the leaves on them are shorter than the radical ones, and narrow and smooth. The flowers stand singly, on short pedicles, arising from the alæ of the leaves; they are very small, milk-white, and fall off very soon.

This is frequent about Paris, but we have it not in England. Tournefort calls it, Alsine minima flore fugaci; Dillenius, Alsinella muscoso flore repens.

COLDENIA.

THE calyx is a perianthium, compoſed of four leaves: the corolla is of the infundibuliform kind, and is compoſed of four oblong petals: the ſtamina are four ſlender filaments; the antheræ are moderately large, and tumid; the germen is quadriſulcous; the ſtyles are four, and ſhort; the fruit is compoſed of four ſeeds.

There is but one known ſpecies of this genus; it is a native of North America, and is too ſufficiently charactered by this fructification, to need any farther deſcription.

Claſs the Fifth.

PENTANDRIA.

Plants which have in every flower five ſtamina.

OF this claſs ſome have only one ſtyle, ſome two, ſome three, ſome four, ſome five, and ſome yet more. The genera comprehended under it are thence arranged into ſix orders, according to the number of the ſtyles; under each of which, being alſo very numerous, they will be again diſpoſed, according to certain common and obvious characters, into a number of diviſions.

Claſs the Fifth. Order the Firſt.

PENTANDRIA MONOGYNIA.

Plants which have in each flower five ſtamina and one ſtyle.

OF this order there are little leſs than a hundred genera, one ſet of which have monopetalous flowers, ſucceeded each by four ſeeds; another have monopetalous flowers, with the capſules contained within them; a third have monopetalous flowers, with the germen placed below the flower; a fourth have declinated ſtamina; a fifth have monopetalous flowers, with berries placed above the receptacle; and, finally, a ſixth have polypetalous flowers. Theſe are arranged ſeparately under ſo many diviſions.

Claſs the Fifth. Order the Firſt.

Diviſion the Firſt.

Pentandria Monogynia, with monopetalous flowers, ſucceeded by four ſeeds each.

The Herbæ Aſperifoliæ, in general, of Ray.

HELIOTROPIUM.

THE calyx of the Heliotropium is a permanent perianthium, formed of one leaf, tubulated, and divided into five parts at the edge; the corolla conſiſts of a ſingle petal; the tube is of the length of the cup; the limb is plane, divided lightly into five ſegments, and obtuſe: the ſmaller ſegments ſtand alternate, and are acute; the larger are placed between; the mouth is cloſed by five prominent ſquammulæ, which, bending toward one another, form a little ſtar: the ſtamina are five very ſhort filaments, placed in the mouth of the flower; the antheræ are ſmall, and covered: there are four germina; the ſtyle is capillary, and of the length of the ſtamina; the ſtigma is emarginated: there is no pericarpium; the calyx remains unaltered, and contains four oval, acuminated ſeeds.

1. *Heliotropium foliis ovatis integerrimis, ſpicis conjunctis.*
The oval, whole-leaved Heliotrope, with conjunct ſpikes.

The root is oblong, ſingle, hard, and whitiſh: the ſtalk is round, fungous, white, and downy. It grows to ſix or eight inches high: the leaves ſtand ſimple; they are of a roundiſh, but ſomewhat oblong, figure, an inch in length, and more than three quarters of an inch in diameter, when largeſt; but often not a third part ſo large: they are even at the edges, but hoary and white, as the ſtalk. From the alæ of every leaf grows a branch, and, at the tops of theſe, as well as of the main ſtalk, ſtand long and ſlender ſpikes of flowers, the tops of which turn inward, in the manner of thoſe of the myoſotis, and other plants, called ſcorpion-tailed ones: the flowers are ſmall and white, and are arranged very cloſe to one another.

This is not a native of England, but it is frequent in moſt other parts of Europe. C. Bauhine calls it, Heliotropium majus Dioſcoridis; J. Bauhine, Heliotropium majus flore albo.

2. *Heliotropium floribus glomeratis.*
The cluſter-flowered Heliotrope.

The root of this ſpecies is compoſed of a cluſter of white, rigid fibres: the radical leaves ſtand on moderately long pedicles; they are oblong, broad, obtuſe, and hoary, ſoft to the touch, and white: the ſtalk is procumbent, and full of branches; it grows to five or ſix inches long; the leaves on it are ſomewhat ſhorter than the radical ones, approaching more to roundneſs; they are very white and hoary. The flowers are large, and very numerous; they ſtand at the extremity of the ſtalk, in a kind of glomerated cluſters: they are ſweet, and ſoon fall.

This is a native of Sicily. Boccone calls it, Heliotropium majus flore amplo odorato.

The other ſpecies of the Heliotrope are, 1. The little, procumbent Heliotrope. 2. The blue, clary-leaved Heliotrope. 3. The narrower-leaved, blue, clary-like Heliotrope. 4. The narrow-leaved, glaucous Heliotrope. 5. The ſhrubby, woolly, ſea Heliotrope.

The plant, called Heliotropium tricoccon, is not of this claſs, but is deſcribed in it's place.

MYOSOTIS.

THE calyx of the myoſotis is an oblong, erect, acute, and permanent perianthium, divided into five ſhort ſegments at the extremity: the corolla conſiſts of a ſingle petal; the tube is cylindric and ſhort; the limb is plane, and lightly divided into five ſegments; the ſegments are emarginated and obtuſe, and the opening of the flower is cloſed by five convex, prominent ſquammæ, which bend toward one another: the ſtamina are five very ſhort filaments, placed in the neck of the tube: the antheræ are ſmall, and covered; the germina are four; the ſtyle is filiform, and of the length of the tube of the corolla; the ſtigma is obtuſe; the cup becomes larger afterwards, and is erect, and contains in it's cavity four oval, acuminated, ſmooth ſeeds.

1. *Myoſotis foliorum apicibus calloſis.* Mouſe-ear Scorpion-graſs.
The Myoſotis, with callous apices to the leaves.

This is a plant which ſometimes grows in barren, dry grounds, and ſometimes in the mud, about ſhallow waters, or the edges of rivers, &c. in theſe two ſtates it makes ſo very different an appearance, that all the botanical writers, till Linnæus, have deſcribed it under two names, Myoſotis paluſtris, and Myoſotis arvenſis, as two ſpecies; but the one, carried to the place of growth of the other, ſoon ſhews the difference, however, to be merely accidental. The root conſiſts of a number of white fibres; the radical leaves are an inch long, a third of an inch broad, and terminate in an obtuſe point; the ſtalks are round and hairy; thick, when in a wet ſoil; ſlender, when in a dry one: they grow to ſix, eight, or more inches in length; the leaves ſtand alternately on them, and are like the radical ones; the flowers ſtand in long ſpikes, curled up at the extremity,

tremity. When in wet places, they are large, and of a beautiful blue colour; when in dry ones, much ſmaller; uſually blue, but ſometimes yellow.

The plant is frequent with us in both it's ſtates, and is deſcribed under them by C. Bauhine, under the names of Echium ſcorpoides paluſtre, and Echium ſcorpioides arvenſe. Ray calls it, Myoſotis ſcorpiodes paluſtris, and Myoſotis ſcorpioides arvenſis; and Tournefort, Lithoſpermum paluſtre, and Lithoſpermum arvenſe minus.

2. *Myoſotis ſeminibus echinatis.* **Little, blue Hound's-tongue.**
Echinated-ſeeded Myoſotis.

The root is oblong, ſlender, black, and of a ſweet taſte; the radical leaves are oblong, narrow, white, hoary, and pointed. The ſtalk is ſlender, hairy, angular, and eighteen inches high; the leaves ſtand alternately on it, at very ſmall diſtances, ſo that it is, in a manner, covered with them; they are ſhaped like the leaves of gromwell, oblong, ſomewhat broad, pointed, and ſoft to the touch; they are covered with very long hairs. The ſtalk is divided into four or five ramifications; toward the top theſe ſtand obliquely, and are long, ſlender, and curled up at the ends; the lower part of theſe is thick-ſet with ſmall, alternate leaves; the upper part with flowers, placed alſo alternately; they are ſmall, but of a beautiful colour.

This is not a native of England, but is frequent in many other parts of Europe. Linnæus calls it, Myoſotis ſeminibus aculeatis triglochidibus; C. Bauhine, Cynogloſſum minus; Tournefort, Bugloſſum ſemine echinato.

LITHOSPERMUM.

THE calyx of the Lithoſpermum is a permanent perianthium, oblong, and divided into five ſubulated and hollowed ſegments: the corolla conſiſts of a ſingle petal, of the length of the calyx; the tube is cylindric; the limb lightly divided into five ſegments, obtuſe and erect, and the mouth open: the ſtamina are five very ſhort filaments; the antheræ are oblong, and appear in the mouth of the corolla; the germina are four; the ſtyle is filiform, and of the length of the tube of the corolla; the ſtigma is obtuſe and bifid: there is no pericarpium, but the cup becomes patulous and long, and contains four hard, oval, acuminated ſeeds.

1. *Lithoſpermum ſeminibus lævibus, corollis vix calycem ſuperantibus.* **Common Gromwell.**
The ſmooth-ſeeded Lithoſpermum, with corollæ ſcarce longer than the cup.

The root is perennial, of the thickneſs of a finger, woody, and furniſhed with many fibres: the ſtalk is round, hard, rigid, rough to the touch, and two or three feet high; it is divided toward the top into a number of branches, and is beſet with leaves, alternately placed, at ſmall diſtances, of a duſky green colour, two inches long, an inch broad, and terminating in a ſharp point; they have no pedicles, and thoſe placed toward the top of the ſtalk are broader, in proportion to their length, than the reſt: the flowers ſtand all along the upper part of the branches; they are ſmall and white: the ſeeds are whitiſh, and very gloſſy.

This is frequent with us, by road-ſides, and in dry fields. C. Bauhine calls it, Lithoſpermum majus erutum; others, Lithoſpermum vulgare.

2. *Lithoſpermum ſeminibus rugoſis, corollis vix calycem ſuperantibus.* **Baſtard Alkanet.**
The rough-ſeeded Lithoſpermum, with corollæ ſcarce longer than the cups.

The root is annual; it is ſimple, oblong, reddiſh, and woody. The plant grows to a foot, or more, in height: the ſtalk is round, thick, rough to the touch, and, at the top, is divided into three or four branches: the leaves are an inch and a half long, half an inch broad, of a pale green colour, hairy, and ſoft to the touch. The flowers ſtand on ſhort pedicles, in the alæ of the leaves; they are white and ſmall; the ſeeds are rugoſe.

This

This is very common in our corn-fields, in May. C. Bauhine calls it, Lithoſpermum arvenſe radice rubra; others, Anchuſa degener facie milii ſolis, and Anchuſa ſylveſtris.

ANCHUSA.

THE calyx is an oblong, cylindric, acute perianthium, divided into five ſegments, and permanent: the corolla conſiſts of a ſingle petal; the tube is cylindric, and of the length of the cup; the limb is lightly divided into five ſegments, erecto-patent, and obtuſe; the opening is cloſed by five oblong, convex, prominent, and connivent ſquammulæ; the ſtamina are five very ſhort filaments, placed in the mouth of the corolla; the antheræ are oblong, incumbent, and covered: there are four germina; the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is obtuſe, and emarginated; the cup becomes larger, and ſerves as a fruit, containing in it's cavity four oblong, obtuſe, and gibbous ſeeds.

This genus comprehends the Anchuſa of authors, and the Bugloſſum of Tournefort and others.

1. *Anchuſa foliis linearibus.* **Narrow-leaved Alkanet.**
Linear-leaved Anchuſa.

The root is oblong, thick, and of a reddiſh colour. The plant grows to two feet high; the ſtalks are rigid and woody, ſmooth in the lower part, but hairy toward the top; the leaves are an inch, or more, in length, very narrow, and pointed at the end, much reſembling the leaves of the common roſemary: the flowers ſtand on the upper parts of the branches, and are ſmall, and of a purple, ſometimes a bluiſh, colour.

This is not a native of England, but it is frequent in France and Italy. C. Bauhine calls it, Anchuſa anguſtifolia; Lobel, and others, Anchuſa lignoſior anguſtifolia.

2. *Anchuſa foliis cuneiformibus.* **Broad-leaved Alkanet.**
The Anchuſa, with cuneiform leaves.

The root is oblong, a third of an inch in diameter, and of a red colour: the radical leaves are two inches long, hairy, and a third of an inch broad at the top, whence they grow gradually ſmaller to the baſe: the ſtalk riſes to eight or ten inches high, and is round, thick, and hairy: the leaves ſtand alternately on it, and are in ſhape like thoſe of the root, and covered with long hairs: the flowers ſtand in cluſters, about the tops of the branches; they are ſmall, and of a bright purple colour: the ſeeds are large, and greyiſh.

This is a native of many parts of Europe, but not of England. C. Bauhine calls it, Anchuſa minor puniceis floribus; J. Bauhine, Anchuſa Monſpeliana.

3. *Anchuſa foliis lanceolatis ſpicis, imbricatis.* **Common Bugloſs.**
The lanceolated-leaved Anchuſa, with imbricated ſpikes.

The root is thick, black, and hard, and lives many years. The radical leaves are oblong, broad, and pointed at the extremity: the ſtalk grows to two feet high, and is round and hairy: the leaves ſtand irregularly on it, and very near one another; they are oblong, narrow, and of a bluiſh-green colour; they terminate in a ſharp point, are hairy on both ſides, and even at the edges: the tops of the main ſtalk and branches ſuſtain numbers of flowers, which are ſmall, blue, or reddiſh, and quickly fall off; the tops of the branches curl up, before the flowers open, and are often red.

It is a native of ſome parts of Germany; we have it only in gardens. C. Bauhine calls it, Bugloſſum anguſtifolium minus; J. Bauhine, and others, Bugloſſum vulgare.

The other ſpecies of Anchuſa are, 1. The borrage-leaved, ever-green Anchuſa. 2. The ſinuated-leaved Anchuſa. 3. The great, black-flowered Anchuſa. 4. The great, Cretic Anchuſa. 5. The little, field Anchuſa, called wild Bugloſs. 6. The bullated, Cretic Anchuſa. 7. The narrow-leaved, dentated Anchuſa. 8. The gromwell-leaved, ſhrubby Anchuſa. 9. The little, yellow-flowered Anchuſa. 10. The long and narrow-leaved Anchuſa. 11. The hoary, ſea Anchuſa. 12. The procumbent, acaulous Anchuſa. 13. The tree Anchuſa. 14. The tall, narrow-leaved Anchuſa; and, 15. The yellow-flowered, oriental Anchuſa.

CYNOGLOSSUM.

THE calyx is an oblong, acute, permanent perianthium, divided into five ſegments at the edge; the corolla conſiſts of a ſingle petal, of the length of the cup; the tube is cylindric, and ſhorter than the limb, which is lightly divided into five ſegments, and obtuſe; the mouth of the corolla is cloſed up by five convex, prominent, and connivent ſquammulæ; the ſtamina are five very ſhort filaments in the mouth of the corolla; the antheræ are roundiſh and naked; the germina are four; the ſtyle is ſubulated, and of the length of the ſtamina; the ſtigma is emarginated, and the ſtyle is permanent; the fruit conſiſts of four roundiſh, ſcabrous, depreſſed capſules: the ſeeds are ſingle, of an oval figure, gibbous, acuminated, and ſmooth. The eſſential character is in the four monoſpermous capſules, with the permanent ſtyle.

This genus comprehends the Cynogloſſum, and the Omphalodes of authors.

1. *Cynogloſſum foliis lanceolato-ovatis, corollis calycem equantibus.* Common Hound's-tongue.

The Cynogloſſum, with ovato-lanceolate leaves, and corollæ of the ſize of the cup.

The root is thick, large, and black on the outſide, white within, of a diſagreeable ſmell, and ſweetiſh taſte. The radical leaves are ſix or eight inches long, and an inch or two in breadth, of a blue green colour, ſoft to the touch, and full of large ribs. The ſtalk riſes to two feet high; it is round, hairy, and thick-ſet with leaves, which are long, narrow, and pointed at the ends; of a ſtrong ſmell, and pale glaucous colour. The top of the ſtalk is divided into ſeveral branches, and on theſe ſtand long ſeries of flowers, ſmall, and of a duſky reddiſh colour.

It is common with us in barren places, and by way-ſides. C. Bauhine calls it, Cynogloſſum majus vulgare. J. Bauhine and others, Cynogloſſum vulgare. It's root is kept in the ſhops, and is eſteemed a pectoral and narcotic.

2. *Cynogloſſum ſtaminibus corollam equantibus.* Great Northern Hound's-tongue.

The Cynogloſſum, with ſtamina as long as the corolla.

The root is thick, long, black on the outſide, and biennial. The radical leaves are a foot long, very ſoft, of a pale glaucous colour, three inches broad, and terminate in a point. The ſtalk riſes to three feet high; the leaves ſtand irregularly, and very thick on it; they are whitiſh, oblong, and pointed: the flowers are placed in long ſeries, on the tops of the branches; they are moderately large, of a fine deep purple, and have the ſtamina ſo long, that they riſe to the top of the corolla, or a little beyond it.

It is a native of Italy. Columna calls it, Cynogloſſa montana maxima frigidarum regionum.

3. *Cynogloſſum corollis parvis, foliis anguſtioribus.* Green-leaved Hound's-tongue.

The ſmall-flowered, narrow-leaved Cynogloſſum.

The root is long, and black on the ſurface. The radical leaves are ſix inches long, narrow, of a bright green colour, and ſoft to the touch: the ſtalk riſes to three feet high, and is green, hollow, round, hairy, and branched. The leaves ſtand thick on it; they are oblong and narrow, of a deep green on the upper ſurface, and white underneath, ſoft to the touch, and ſomewhat hairy. They have not the rank ſmell of the common Hounds-tongue: the flowers are ſmall and of a duſky ferrugineous-red.

This is a native of England, but is not common. I have met with it, near Thorndon, in Eſſex. C. Bauhine calls it, Cynogloſſum ſempervirens. J. Bauhine, Cynogloſſa folio virente.

The other principal ſpecies of Cynogloſſum are, 1. The great Belgic Cynogloſſum. 2. The large-flowered, green-leaved Cynogloſſum. 3. The cluſtered-flowered Cynogloſſum. 4. The umbilicated Cynogloſſum. 5. The great, broad-leaved, ſtinking, Cretic Cynogloſſum. 6. The narrow, ſilver-leaved, Cretic Cynogloſſum. 7. The Spaniſh, gromwel-leaved Cynogloſſum. 8. The woolly-cupped, oriental Cynogloſſum.

ſum. 9. The echium-leaved, oriental Cynogloſſum. 10. The plantain-leaved Cynogloſſum; and 11. The bugloſs-leaved Cynogloſſum. To theſe we are to add three others, called by authors Omphalodes: 1. The flax-leaved Cynogloſſum. 2. The tall, larger-leaved Cynogloſſum. 3. The comfrey-leaved, vernal Cynogloſſum.

SYMPHYTUM.

THE calyx of the Symphytum is an erect, acute; pentangular, permanent perianthium, divided into five parts at the edge: the corolla conſiſts of a ſingle petal, formed into a very ſhort tube, and a tubulated, ventricoſe limb, ſomewhat thicker than the tube, and divided into five ſegments at the edge, obtuſe and reflex. The opening is furniſhed with five ſubulated rays, ſhorter than the limb, and connivent, ſo as to form a cone. The ſtamina are five ſubulated filaments, placed alternately with the radii of the aperture: the antheræ are acute, erect, and covered; the germina are four; the ſtyle is filiform, of the length of the corolla; the ſtigma is ſimple. There is no pericarpium, but the calyx grows larger, and contains four gibbous, pointed ſeeds, placed with their apices connivent.

This genus comprehends the Symphytum of Tournefort, and the Conſolida of Rivinus.

1. *Symphytum foliis ovato-lanceolatis.* **Common Comfrey.**
The Symphytum, with ovato-lanceolate leaves.

The root is oblong, irregularly ſhaped, an inch thick, black on the outſide, white within, and extreamly viſcous. The radical leaves are a foot long, three or four inches broad in the middle, even at the edges, rough to the touch, of a pale green, and terminate in a point. The ſtalk grows to two feet, or more, in height; the ſhape is round, but it is edged with membranes from the baſes of the leaves; it is as thick as a finger, green, hairy, and rough to the touch; toward the top it is divided into ſeveral branches, which are covered with long ſeries of flowers, moderately large, and of a white colour, ſometimes purple, ſometimes yellow: this variation of the colour on the flower, has by ſome been made the diſtinction of two different ſpecies, but erroneouſly.

The plant is a native of England, and is common in watery places. *C. Bauhine* calls it, Symphytum conſolida major; others, Conſolida major, and Symphytum majus, or Vulgare. The root of this is a powerful agglutinant, good in the fluor albus.

2. *Symphytum foliis oblongis anguſtioribus.*
The oblong, narrow-leaved Symphytum.

The root is tuberous, long, branched, and brittle, black on the ſurface, white within. The radical leaves are eight inches long, and two and a half in breadth, of a pale bright green colour, and not ſo rugoſe or rough to the touch, as thoſe of the common Comfrey. The ſtalk is green, ſucculent, and edged with membranes from the baſes of the leaves, ſo that it looks pentangular: the leaves ſtand at diſtances on it; they are oblong, narrow, pointed, and of a bright green: the flowers are of a whitiſh colour, longer, but not thicker than thoſe of the common Comfrey.

This is frequent in the woods of Germany, and other places. It varies much in ſize, and has been deſcribed by C. Bauhine, in theſe ſtates, as two ſpecies, under the names of Symphytum majus tuberoſa radice, and Minus.

PULMONARIA.

THE calyx of the Pulmonaria is a permanent, cylindric, and ſomewhat pentangular perianthium, formed of one leaf, and divided into five ſegments at the edge. The corolla conſiſts of a ſingle petal: the tube is cylindric, and of the length of the cup: the limb is lightly divided into five ſegments, obtuſe, and erecto-patent. The mouth is open; the ſtamina are five very ſhort filaments, placed in the mouth of the corolla: the antheræ are erect and connivent: there are four germina: the ſtyle is

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Ilex

Cuscuta

Alchymilla

Elaagnus

Euonymus

Cornus

Hypecoum siliquis pendulis teretibus equalibus

Gimedium

Plantago

Polamogeton

Trapa

Pulmonaria foliis radicalibus lanceolatis

Lysimachia

Ipomoea

Samolus

Borrago

Primula

Genipa

Polemonium

Soldanella

Echium

Phyteuma

Cerinthe

Menianthes

Androsace

Hydrophyllum

Campanula

Trachelium

B. Cole Sculp.

is filiform, and ſhorter than the cup; the ſtigma is obtuſe and emarginated. There is no pericarpium: the calyx, unaltered, contains four roundiſh, obtuſe ſeeds.

1. *Pulmonaria foliis radicalibus ovato-cordatis.* Sage of Jeruſalem.
The Pulmonaria, with ovato-cordated, radical leaves.

The root is compoſed of a cluſter of white and moderately thick fibres. The radical leaves are five or ſix inches long, and three or four inches broad, of a duſky green colour, even at the edges, covered with a long hairineſs, and ſoft to the touch. The ſtalk grows to ſix, eight, or ten inches high; it is hairy, angular, and often purpliſh: the leaves that ſtand on it are placed irregularly, and have no pedicles: they are oblong, and an inch in breadth. The tops of the ſtalks uſually are curled, before the flowers are all opened; the flowers are moderately large, and of a blue or purpliſh colour; often ſome are blue, others purple, on the ſame branch; ſometimes alſo they are white. The radical leaves are ſometimes alſo plain and uniform, ſometimes they are blotched with white.

This is a native of many parts of Europe, but with us is only kept in gardens. C. Bauhine calls it, Symphytum maculoſum ſive Pulmonaria maculoſa. J. Bauhine, Pulmonaria maculoſa. The leaves are accounted pectoral and cardiac, but are not uſed in the preſent practice.

2. *Pulmonaria foliis radicalibus lanceolatis.* Echium-leaved Pulmonaria.
The Pulmonaria, with lanceolated, radical leaves.

The root conſiſts of a great number of thick, white fibres. The radical leaves are five inches long, and about two and a half broad, and are ſhaped much like thoſe of the bugloſs: they are hairy, and of a duſky green colour. The ſtalk is angular and thick; it grows ſometimes to a foot high, and is furniſhed all the way up with oblong, narrow leaves; at the top it divides into two or three ſhort ramifications, which are curled at the ends, and on which ſtand three or four flowers at a time; theſe are large, and of a beautiful red colour, ſometimes white.

This is ſaid to be a native of England, and found in woods in Hampſhire. C. Bauhine calls it, Pulmonaria anguſtifolia rubente cæruleo flore; others, Pulmonaria foliis echii.

The other more ſingular ſpecies are, 1. The roundiſh-leaved Pulmonaria. 2. The narrow-leaved, blue Pulmonaria. 3. The ſtrawberry-ſcented Pulmonaria. 4. The Cretic Pulmonaria, with inflated cups. 5. The tunnel-flowered, narrow-leaved, oriental Pulmonaria.

BORRAGO.

THE calyx of the Borrago is a permanent perianthium, divided into five ſegments at the top. The corolla conſiſts of a ſingle, petal of the length of the cup: the tube is ſhort; the limb divided into five ſegments, and plane; the opening coronated, with five obtuſe, emarginated prominences. The ſtamina are five ſubulated and connivent filaments: the antheræ are oblong and connivent; they are affixed to the middle of the inner ſide of the ſtamina: the germina are four; the ſtyle is filiform, and longer than the ſtamina; the ſtigma is ſimple. There is no pericarpium, but the cup grows larger and inflated, and contains four ſeeds of a roundiſh figure, rugoſe, carinated outwardly from the point, globoſe at the baſe, and inſerted into a hollowed receptacle.

This genus comprehends the Borrago of authors, and the Borraginoides of Tournefort, and Cynogloſſoides of Iſnard. The figure of the ſegments of the calyx, or of the ſize of the tube of the corolla, are not to be ſuppoſed ſufficient characters for diſtinguiſhing of genera.

1. *Bor-*

1. *Borrago foliis omnibus alternis, calycibus patentibus.* **Common Borrage.**
The Borrage, with all the leaves alternate, and with patent cups.

The root is oblong, half an inch thick, white, and full of a viſcid juice. The radical leaves are ſix or eight inches long, and four or five broad, of a blackiſh green colour, very rugoſe, and plicated, and very rough to the touch; they lie ſpread on the ground, and have a kind of little black ſpines all over them. The ſtalks are thick, tender, green, hollow, and hairy; they grow to two feet high, and have all the leaves placed in an alternate order on them, like the radical ones, only ſmaller: the ſtalk divides toward the top into three or four branches, and on theſe ſtand the flowers; they have pedicles an inch, or more, in length, and are large, and uſually of a beautiful blue, ſometimes red, ſometimes white.

The plant is not a native of England, but it is common in our gardens. J. Bauhine calls it, Borrago floribus cæruleis.

2. *Borrago foliis ramificationum oppoſitis, calycis foliolis ſagittatis.*
The Borrage, with oppoſite leaves at the ramifications, and ſagittated ſegments of the cup.

The root is large, white, and oblong; the radical leaves are oblong and narrow, of a pale green colour, and rugoſe: the ſtalk is green, round, and hairy: the leaves ſtand alternately, except at the baſe of the ramifications, where there are always two oppoſite one to another: they are oblong and narrow, and ſurround the ſtalk at the baſe. The flowers are large, and of a beautiful pale blue, and the ſegments of the cup are of a ſagittated figure.

This is a native of Ceylon, but we have it in ſome of our ſtoves. Iſnard calls it, Cynogloſſoides folio caulem amplexante. Boerhaave, Boraginoides anguſtifolia flore palleſcente cæruleo.

LYCOPSIS.

THE calyx of the Lycopſis is a permanent perianthium, divided into five oblong, acute, patulous ſegments. The corolla conſiſts of a ſingle petal: the tube is cylindric and crooked: the limb is lightly divided into five ſegments: the mouth or opening of the flower is ſhut up by five connivent, prominent, convex ſquammulæ: the ſtamina are five very ſmall filaments, ſituate at the flexure of the corolla: the antheræ are ſmall and covered; the germina are four: the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is obtuſe and bifid. The calyx ſupplies the place of a pericarpium; it becomes large and inflated, and contains four ſeeds of an oblong figure. The great diſtinguiſhing character of this genus is in the flexure of the tube of the corolla.

It comprehends the Lycopſis of authors, the Echioides of Rivinus and Dillenius, the Bugloſſoides of Rivinus, and ſome of the Bugloſſa of Moriſon.

1. *Lycopſis foliis lanceolatis, calycibus florum erectis.*
The lanceolate-leaved Lycopſis, with erect flower-cups.

The root is white, ſimple, and oblong; the radical leaves are oblong and hairy: the ſtalks riſe to a foot high, or more; they are round, tender, and rough to the touch, and toward the top divided into ſeveral branches. Along the ſtalks, from the bottom, ſtand alternately leaves an inch and half long, and not half an inch broad, rough, hairy, and of a duſky green; toward the tops of the branches ſtand the flowers, and under them a peculiar kind of leaves of a triangular figure, ſhort, pointed, and ſurrounding part of the ſtalk at their baſe. The flowers ſtand ſingle, on very ſhort pedicles, riſing from the alæ of theſe leaves: they are ſmall, and of a pale blue colour.

This is frequent in our corn-fields. C. Bauhine calls it, Bugloſſum ſylveſtre minus. J. Bauhine, Echium Fuchſiii ſive Borrago ſylveſtris.

2. *Ly-*

2. *Lycopſis foliis repandis dentatis calloſis, caule decumbente corollis cernuis.*
The procumbent Lycopſis, with callous, dentated leaves, and bending corollæ.

The root is ſmall, white, and oblong; the radical leaves are oblong, narrow, and dentated at the edges, rough to the touch, and covered with little white protuberances or bullæ. The ſtalk grows to ſix or eight inches long, and lies procumbent on the ground, and has a number of oblong, narrow, bullated leaves, placed alternately on it, and bending backward; at the top of the ſtalks and branches ſtand the flowers; they are ſmall, but of a beautiful blue, and variegated.

This grows out of the fiſſures of walls in the iſland of Crete, and elſewhere, in that part of the world. Moriſon calls it, Bugloſſum annuum humile foliis bullatis, flore cæruleo eleganter variegato. We have it ſometimes in our gardens.

3. *Lycopſis foliis integerrimis, calycibus fructuum inflatis pendulis.*
The whole-leaved Lycopſis, with pendulous cups, when in ſeed.

The root is white, oblong, and ſimple: the radical leaves are three inches long, and an inch broad: the ſtalk grows to ſix or eight inches high; it is ſolid, but infirm, and ſcarce able to ſupport itſelf erect. The leaves ſtand alternately on it; they are broadeſt at the baſe, and go narrower to the point; they are about an inch and a half long, and not half an inch broad, and covered with a white, hoary matter. The flowers ſtand at the tops of the branches; they are very ſmall and black: the cup they ſtand in is inflated, and, after they are fallen, it becomes much more ſo, repreſenting, in ſome degree, the caſe or huſk of the winter cherry.

This ſpecies is a native of Hungary; we have it in our gardens. Rivinus calls it, Echioides flore pullo. Moriſon, Bugloſſum procumbens annuum pullo minimo flore.

ECHIUM.

THE calyx of the Echium is a permanent perianthium, divided at the edge into five erect, ſubulated ſegments: the corolla conſiſts of a ſingle petal: the tube is very ſhort; the limb is erect, and grows gradually wider: at the extremity it is divided into five ſegments; two of the upper ſegments are longer than the reſt, and the lower one is ſmall, acute and reflex. The ſtamina are five ſubulated filaments, of the length of the corolla; the antheræ are oblong and incumbent: the piſtil has four germina; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is obtuſe and bifid: there is no pericarpium. The cup becomes rigid, and contains in it four roundiſh and obliquely acuminated ſeeds.

1. *Echium caule ſimplici, foliis caulinis lanceolatis hiſpidis, floribus ſpicatis lateralibus.* **Viper's Bugloſs.**
The ſimple-ſtalked, lanceolate-leaved Echium, with ſpiked lateral flowers.

The root is four inches long, and half an inch thick, brown, hard, and inſipid. The radical leaves are oblong and narrow: the ſtalk grows to a foot and half high, and is round, rough, and beautifully ſpotted with red and black: the leaves ſtand very cloſe, and are oblong, and pointed at the ends: the flowers grow all up the ſtalk, from near the bottom to the top; they are large, and very beautiful, of a fine blue, with an admixture of red in various degrees.

This is common in dry places, and by way-ſides. C. Bauhine calls it, Echium vulgare. The powder of it's root is recommended againſt epilepſies, but it is not uſed.

2. *Echium corollis vix calycem excedentibus margine villosis.*
The little-flowered Echium, with villose edges to the flower.

The root is simple, oblong, and brown; the radical leaves are two inches and a half long, half an inch wide, and pointed at the ends: the stalk grows to two feet high, and is very robust, and beautifully spotted: the leaves stand thick on it; they are an inch and a half long, and scarce more than a third of an inch broad, of a pale green colour, and hairy, but not so rough as those of the common Echium. The flowers are small, scarce appearing beyond the cup, and are of a bluish-white colour.

It is a native of Italy, and is also wild with us. C. Bauhine calls it, Echium majus et asperius flore albo, and Lycopsis; Camerarius, Echium flore albo.

3. *Echium calycibus fructiferis distantibus.*
The Echium, with distant, fructiferous cups.

The root is long and black; the radical leaves are two inches long, and approach to an oval figure: the stalks rise to twelve or fourteen inches high, and are round, firm, hairy, and beautifully spotted: the leaves stand thick on them, and are an inch, or more, in length, and very narrow; the stalk is divided into several branches toward the top, and has a number of flowers on it; they are large and red.

It is a native of Hungary, and many parts of Germany, and is also common in the East. C. Bauhine calls it, Echium Creticum angustifolium et latifolium rubrum. Ray, Echium flore rubro.

The other more singular species are, 1. The great-leaved, Portugal Echium. 2. The great-flowered, narrow-leaved, very rough Echium. 3. The great-flowered, Sea-Echium. 4. The narrow, hairy-leaved Echium. 5. The rosemary-leaved Echium.

ASPERUGO.

THE calyx of the Asperugo is a permanent perianthium, composed of a single leaf, erect, and divided into five segments at the edge, with two denticles between each pair of the segments. The corolla consists of a single petal; the tube is cylindric, and very short: the limb is small, and divided into five segments: the opening of the flower is closed up by five prominent and connivent convex squammulæ. The stamina are five very short filaments, in the mouth of the corolla; the antheræ are oblong, and covered: the germina are four, and compressed; the style is filiform and short; the stigma is obtuse. There is no pericarpium, but the cup becomes very large, erect, compressed, and connivent, in manner of two parallel plates, and having five teeth on it's rim. The seeds are four, and oblong: the cup, containing the seeds, is the great characteristic of this genus, of which there is only one known species.

ASPERUGO.

The root of the Asperugo is white, oblong, and slender: the radical leaves are three inches long, narrow at the base, and broadest in the middle, terminating in an obtuse point. The stalks grow to two feet in length, but they do not stand erect, but lie on the ground: they are much branched, angular, hollow, and armed with a kind of crooked spines, so that they stick to every thing they touch. The leaves stand single and alternate; on the lower part of the stalks, toward the top, there are sometimes two or three together: they are two inches long, near half an inch broad in the middle, and narrower at each end; the lower ones are more obtuse than the upper; they are all hairy: the flowers stand singly in the alæ of the leaves or divarications of the branches; they are very small, and of a deep purplish blue. As soon as the flower is fallen, the cup assumes the singular figure, which some have likened to a goose's foot.

It is found in some parts of England, but is not common. I met with it, this year, near Lincoln-heath. Tournefort calls it, Asperugo vulgaris; C. Bauhine, Buglossum sylvestre caulibus procumbentibus; Rudbeck, Alysson echioides Germanorum.

CERINTHE.

CERINTHE.

THE calyx of the Cerinthe is a permanent perianthium, divided into five oblong, equal ſegments. The corolla conſiſts of a ſingle petal: the tube is ſhort and thick; the limb is a little thicker than the tube, and is ſomewhat bellied; it is divided into five ſegments, and the mouth is open and pervious. The ſtamina are five very ſhort, ſubulated filaments; the antheræ are acute and erect: the germen is divided into four parts; the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is obtuſe. The fruit conſiſts of two hard oſſeous bodies, of an oval figure, gibbous on the outſide, plane within, acute, emarginated, and containing each two cells: the ſeeds are ſingle, roundiſh, and acuminated.

This genus comprehends the Cerinthe and the Cerinthoides of Boerhaave. The Cerinthoides has four diſtinct ſeeds, but, the eſſential character being in the flower, this is not to be regarded as a generical character.

1. *Cerinthe foliis cordatis ſeſſilibus.* **Purple Honey-wort.**
The Cerinthe, with heart-faſhioned leaves without pedicles.

The root is oblong, white, thick, and furniſhed with many fibres. The ſtalks grow to two feet in height; they are round, thick, and green, and are divided from the very root into a number of ramifications: the leaves ſtand very thick upon them; they are oblong, broad, and obtuſely pointed, of a bluiſh green colour, and ſpotted with blotches of white: the branches bend downward toward their tops, and are furniſhed with a great many flowers, each on it's ſeparate pedicle. They are ſmall, and of a purpliſh colour; ſometimes yellowiſh or whitiſh.

It is a native of moſt of the ſouthern parts of Europe; we have it in our gardens. C. Bauhine call it, Cerinthe flore ex rubro purpuraſcente; and, as if another ſpecies, a ſecond time, Cerinthe flavo flore aſperior.

2. *Cerinthe foliis anguſtioribus, corollis brevibus.*
The narrow-leaved, ſhort-flowered Cerinthe.

The root is oblong, as thick as a finger, and blackiſh: the radical leaves are three inches long, and moderately broad, ſomewhat rough to the touch, and of a bluiſh-green. The ſtalks are a foot, or more, in length, but weak and procumbent: the leaves ſtand alternately, and are ſmall, oblong, and of a bluiſh colour, with a ſilvery caſt, narrow, and even at the edges. The flowers ſtand in the alæ of the leaves: they are large, and red, before they open; but when fully expanded, blue.

This is a native of England; we have it by the ſea-coaſts, in ſome of our northern counties, in abundance. Boerhaave calls it, Cerinthoides argentea flore pulchre cæruleo; Ray, Echium marinum. Moriſon makes it a Cynogloſſum, and others a Bugloſſum, but it's characters ſhew it a true Cerinthe.

The other ſpecies are, 1. The little, yellow Cerinthe. 2. The Alpine Cerinthe, with ſtriated flowers. 3. The narrower and rougher-leaved Cerinthe.

MESSERSMIDIA.

THE calyx is a ſhort, hairy perianthium, divided into five ſegments; the corolla conſiſts of a ſingle petal of a cylindric form, but open at the mouth: the ſtamina are five long, ſlender, filiform filaments; the antheræ are tumid; the germen is formed of four parts; the ſtyle is very ſlender, and moderately long: the fruit conſiſts of four ſeeds. Of this genus there is only one known ſpecies.

MESSERSMIDIA.

The root is long, thick, and of a browniſh colour. The radical leaves are three inches long, two and a half broad, and of a lanceolated ſhape: the ſtalk is branched, round, and hairy; it grows to a foot in height: the leaves on it ſtand alternately; they are two inches long, more than an inch broad, and lanceolated of a duſky greeniſh colour. The flowers ſtand in cluſters about the tops of the ſtalks; their pedicles are more than an inch long, and grow from the alæ of the leaves: the calyx is hairy. The whole habit of the plant has much the appearance of a cerinthe.

It

It is a native of Ruſſia, and grows there in barren, ſandy places. Amman calls it, Arguſia montana.

TOURNEFORTIA.

THE calyx of the Tournefortia is a ſmall permanent perianthium, divided into five lanceolated ſegments: the corolla conſiſts of a ſingle petal; the tube is oval, and longer than the cup; the limb is lightly divided into five ſegments, and patent; the ſegments broad and acute. The ſtamina are five ſubulated filaments, of the length of the tube of the corolla; the antheræ are ſimple, and placed in the mouth: the germen is globoſe, and placed under the receptacle of the flower: the ſtyle is ſimple, and of the length of the ſtamina; the ſtigma is ſimple. The fruit is a globoſe, bilocular berry: the ſeeds are two, of an oval figure, and ſeparated by a pulp.

Claſs the Fifth. Order the Firſt.

Diviſion the Second.

Pentandria Monogynia, with monopetalous flowers, and with capſules within the flowers.

ANDROSACE.

THE calyx of the Androſace is double; the univerſal involucrum is very ſmall, but compoſed of many leaves, and contains many flowers: the perianthium is permanent, and of a pentagonal figure, formed of one leaf, and divided into five ſegments, at the top erect and acute. The corolla conſiſts of a ſingle petal; the tube is of an oval figure, and is ſurrounded by the calyx: the limb is divided into five obtuſe, entire ſegments, of an ovato-oblong figure: the ſtamina are five very ſhort filaments, placed within the tube of the flower: the antheræ are oblong, erect, and included; the germen is globoſe; the ſtyle is filiform, and very ſhort; the ſtigma is globoſe, and included. The fruit is a globoſe capſule, ſtanding on a plane cup, containing one cell, and dividing into five parts at the top; the ſeeds are numerous, and roundiſh, gibbous on one ſide, and plane on the other; the receptacle is erect and free.

1. *Androſace foliis lanceolatis dentatis glabris, perianthiis corolla brevioribus angulatis.*

The ſmooth, dentated, lanceolato-leaved Androſace, with a ſhort, angulatod, perianthium.

The root is oblong, ſlender, and reddiſh; the radical leaves are numerous, and ſpread on the ground; they are ſmall, oblong, and crenated at the edges: the ſtalks are numerous, two or three inches high, naked, a little hairy, and firm: at the ſummit of each ſtands a kind of little umbel, compoſed of eight or ten flowers, ſuſtained each on it's ſeparate, oblong pedicle; they are ſmall and white.

This is not a native of England, but is found in moſt other of the northern parts of Europe. C. Bauhine has deſcribed it three times. Amman mentions what he calls another ſpecies, under the name of Androſace coronopi foliis; but the ſeeds ſent by himſelf, and ſown, prove it to be the ſame with this. Buxbaum calls it, Androſace montana flore minore; Ray, Alſine verna Androſaces capitulis.

2. *Androſace perianthiis maximis.*

The great cupped Androſace.

The root is ſmall, oblong, and white; the radical leaves are very numerous; they lie ſpread on the ground, and are two inches long, half an inch broad, hairy, ribbed in the manner of plantain leaves, ſomewhat crenated, and of a pale green colour.

The

The ſtalks are numerous; they are five or ſix inches high, round, naked, a little hairy, and of a green or purpliſh colour: at the top ſtand ſix or eight pedicles, an inch long, and forming a kind of umbel; on each of theſe ſtands a very large perianthium, with a ſmall, white flower in it.

This is a native of Auſtria. It is kept in ſome of our gardens. Tournefort calls it, Androſace vulgaris latifolia annua. Cluſius, Androſace altera.

The other ſpecies of Androſace are, 1. The narrow-leaved, ſmooth, perennial Androſace. 2. The narrow-leaved, hairy, many-flowered Androſace; and, 3. The ſingle-floweréd, narrow-leaved Androſace. The two laſt ſpecies are called, by moſt authors, Sedusm.

PRIMULA.

THE common involucrum of the flowers of the Primula is ſmall, formed of many leaves, and contains ſeveral flowers: the perianthium is formed of one leaf; it is tubulous, pentangular, divided into five ſegments, erect, acute, and permanent. The corolla conſiſts of a ſingle petal; the tube is cylindric, and of the length of the cup, and terminated by a ſmall hemiſpheric neck: the limb is patent, and divided into five obtuſe, emarginated, and obverſely cordated ſegments: the ſtamina are five very ſhort filaments, placed within the neck of the corolla: the antheræ are acuminated, erect, connivent, and included: the germen is globoſe; the ſtyle is filiform, and of the length of the cup: the ſtigma is globoſe. The pericarpium is a cylindric capſule, nearly of the length of the cup, covered, unilocular, and opening in ten places at the top. The ſeeds are numerous and roundiſh; the receptacle is of an ovato-oblong figure, and free.

This genus comprehends the Primula veris, and the Auricula urſi, of authors.

1. *Primula foliis denticulatis rugoſis.* **Cowſlip.**
The denticulate and rugoſe-leaved Primula.

The root is compoſed of a great number of thick, whitiſh fibres, very long, furniſhed with other ſmaller fibres at their ſides, and affixed to a ſmall, reddiſh, ſquammoſe tuberoſity or head. The radical leaves are two inches and a half long, an inch and a half broad, of a duſky green, very rugoſe, and ſomewhat denticulate. The ſtalk is ſix or eight inches high, ſingle, naked, round, of a pale, whitiſh colour, and a little hairy. The flowers ſtand in a kind of umbel at the top, eight or ten together, each on a pedicle of an inch, or more, in length: they are ſmall, yellow, and very ſweet.

It is very common in our meadows in April. J. Bauhine calls it, Primula veris odorata flore luteo ſimplici. C. Bauhine, Verbaſculum pratenſe odoratum.

It is a plant which eaſily runs into varieties, and has been too generally deſcribed under theſe, as if of a different ſpecies. In the fields, the whole plant is ſometimes larger, the flowers broader and paler coloured, and their pedicles longer; in this caſe the common people call it, the great Cowſlip, or Oxlip; and J. Bauhine calls it, Primula veris caulifera pallido flore inodoro. C. Bauhine, Verbaſculum pratenſe inodorum. In gardens, among a multitude of other varieties, the moſt beautiful and moſt ſingular is that in which the calyx aſſumes the appearance of a corolla. This variety is called, by Tournefort and others, Primula veris prolifera flore purpureo; with us, the Polyanthos. This elegant variety is wild, in the eaſtern parts of the world; with us, only in gardens.

The flowers of the common Cowſlip are gently narcotic; a ſyrup of them uſed to be kept in the ſhops, with this intent, but a conſerve anſwers the purpoſe better.

2. *Primula foliis crenatis glabris, limbo florum plano.* **Bird's Eye.**
The ſmooth, crenated-leaved Primula, with the limb of the flower plane.

The root conſiſts of a number of long and thick fibres, affixed to a ſhort, ſmall, ſquammoſe head. The radical leaves are ſpread on the ſurface of the ground; they are an inch and a half long, near an inch broad, and ſerrated about the edges; ſmooth on the ſurface, not rugoſe, or wrinkled, as thoſe of the cowſlip, and of a much pa-

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ler green colour. The ſtalk is four inches high, round, thick, and firm; at it's top ſtand a number of flowers, ten, or more, each on a pedicle of half an inch long; they are uſually of a beautiful pale red, ſometimes of a deep red, and ſometimes white.

This is a native of the North of England. Linnæus calls it, Primula floribus erectis faſtigiatis. Cluſius, Primula veris flore rubro. C. Bauhine, Verbaſculum umbellatum Alpinum minus.

3. *Primula foliis ſerratis carnoſis glabris.* The Auricula, or Ricloſs.
The ſerrated, thick-leaved Primula.

The root conſiſts of a thick, ſquammoſe head, from which grow a multitude of white, long, and thick fibres: the radical leaves are oblong and broad, three inches in length, two in breadth, ſerrated round the edges, and obtuſely pointed, of a pale bluiſh-green colour, and uſually duſty or farinaceous. The ſtalk is round, moderately thick, ſimple, naked, and four or five inches high; at it's top ſtand ten, or more, flowers, on long pedicles, forming a kind of umbel; they are larger than the flowers of the common cowſlip, and of a paler yellow, and their calyx is ſhorter.

This is the native wild ſtate of the plant, from whoſe natural varieties, aſſiſted by culture, all our beautiful auriculas in the gardens are produced.

Theſe natural varieties are only four: 1. The ſmooth, green-leaved kind, with the ſegments of the flower bifid, the limb erect and purple, and the mouth of the flower yellow. 2. The farinaceous-leaved kind, with the ſegments of the corolla emarginated, the limb plane and red, the mouth yellow. 3. The farinaceous-leaved kind, with the ſegments of the corolla undivided, the limb erect and red, the mouth whitiſh; and, 4. The farinaceous-leaved kind, with the ſegments of the corolla bent back, the limb of a blackiſh purple, the opening yellow in the middle, and white at the edges. From the ſeeds of theſe ſeveral varieties collected from plants, which have ſtood among others, and whoſe ſeeds have accidentally been impregnated by the farina of the neighbouring plants, ariſe all thoſe beautiful variations of flowers, which are the pride of the Britiſh and Dutch floriſts, and of thoſe of many other parts of the world. Tournefort mentions ſixteen of theſe varieties, as really diſtinct ſpecies; Cluſius five, and C. Bauhine ſix.

The principal other ſpecies of the Primula are, 1. of the cowſlip and primroſe *kind*: 1. The hoary-leaved Primula. 2. The folioſe-ſtalked Primula. 3. The common Primroſe. 4. The oriental Primula, of which there are a number of varieties. 2. Of the auricula kind, or ſuch as are ranked with the auriculæ by authors, though not properly ſuch, are, 1. The round-leaved Primula. 2. The narrow-leaved Primula. 3. The whole-leaved Primula. 4. The little, broad-leaved Primula.

CORTUSA.

THE calyx of the Cortuſa is a ſmall, patent perianthium, permanent, and divided into five obtuſe ſegments, with reflex tops. The corolla conſiſts of a ſingle petal, and is of the rotated kind: the tube is ſcarce diſcernible; the limb is large, plane, and divided into five roundiſh ſegments, and at the baſe of each of theſe is a round, prominent tubercle. The ſtamina are five ſhort, obtuſe filaments; the antheræ are compoſed of two lamellæ; they are oblong, erect, and affixed to the exterior part of the filaments: the germen is oval; the ſtyle is filiform, and ſcarce equal to the ſtamina: the ſtigma is ſimple; the fruit is a capſule of an ovato-oblong figure, acuminated, furrowed longitudinally on each ſide, formed of two valves, with their ſides involuted, and containing only one cell. The ſeeds are numerous, oblong, obtuſe, and ſmall.

1. *Cortuſa foliis laciniatis.* Bear's Ear Sanicle.
Jagged-leaved Cortuſa.

The root conſiſts of a ſhort and thick tuberous head, from which there grow a multitude of fibres, long, moderately thick, and black. The radical leaves are deeply divided into the ſegments, of a e green colour, ſhining on the upper ſurface, not underneath,

underneath, but no where at all dusty; and of an acrid taste. The stalk is round, slender, and about three inches high, naked, and usually of a purplish colour; at the top stand ten or twelve flowers on long pedicles, forming a kind of umbel; they are large, of a rotated form, and pendent, like so many bells; their colour is a deep blood-red, the mouth yellow.

This is found on the mountains, in the northern parts of Europe. J. Bauhine calls it, Cortusa. C. Bauhine, Sanicula montana latifolia laciniata.

CYCLAMEN.

THE calyx of the Cyclamen is a round, permanent perianthum, divided into five oval segments: the corolla consists of a single petal, of a rotated form; the tube very short, the mouth prominent: the figure of the tube is globose; the size twice that of the cup, yet small and nutant. The limb is large, and turns upward, and is divided into five ovato-lanceolate segments: the neck prominent. The stamina are five very small filaments, in the tube of the corolla: the antheræ are strait, acute, and, in the neck, the germen is roundish; the style is filiform, strait, and longer than the stamina; the stigma is acute; the fruit is a globose berry, opening in five places at the top, and containing only one cell: the seeds are numerous, of a sub-oval, angular figure: the receptacle is oval and free.

1. *Cyclamen foliis cordatis corolla reflexa.* **Autumnal Sowbread.**
The cordated-leaved Cyclamen, with reflex flowers.

The root is large, tuberous, and of a roundish figure, furnished with a few fibres; the radical leaves stand on pedicles of three inches long; they are about three quarters of an inch in diameter, roundish, but cordated, of a dark green, usually spotted with white on the upper side, and purple underneath: the flowers stand singly, on long pedicles; they are large, red, and of a sweet smell.

It is a native of some of the northern parts of Europe, and grows in damp, shady places; we have it frequent in our gardens. Clusius calls it, Cyclamen odorato purpureo flore. C. Bauhine, Cyclamen orbiculato folio subtus purpurascente.

2. *Cyclamen foliis angulosis corolla reflexa.*
The angular-leaved Cyclamen, with reflex flowers.

The root is very large, roundish, and depressed, black on the surface, white within, and has a few fibres. The radical leaves stand on pedicles of four inches long; they are an inch long, and near as much in breadth, sinuated in such manner, as to resemble the leaves of ivy, and serrated round the edges; of a deep green, spotted with white on the upper surface, and purplish underneath. The flowers are large, of a deep purple, like that of the violet, and, bend downward; they are affixed singly to long, slender, naked stalks.

This is a native of Italy, but is frequent in our gardens.

The varieties of these two species of Cyclamen, owing to culture, are almost innumerable. Tournefort has mentioned more than thirty of them, under the titles of different species.

SOLDANELLA.

THE calyx of the Soldanella is a permanent perianthium, divided into five lanceolated segments. The corolla consists of a single petal; it is of a campanulated form, and jagged at the edge: the stamina are five subulated filaments; the antheræ are simple; the germen is roundish; the style is filiform, of the length of the corolla, and permanent: the stigma is obtuse. The fruit is an oblong, cylindric capsule, obliquely striated, containing only one cell, and opening in ten places at the point: the seeds are numerous, acuminated, and small, the receptacle columnar and free.

1. *Soldanella*

1. *Soldanella foliis ſubrotuudis.* **Sea Bind-weed.**
Roundiſh-leaved Soldanella.

The root is fibrous and white: the radical leaves ſtand on pedicles of two or three inches long; they are roundiſh, but ſomewhat broader than long, of a duſky green colour, and full of a milky juice: the ſtalks are procumbent and creeping, ſix or eight inches long, ſometimes much more, and take root at the joints. The flowers riſe from the alæ of the leaves, which are like the radical ones; they ſtand ſingly, on pedicles of two or three inches long, and are large, and of a fine purple, not leſs than half an inch in diameter at the mouth.

It is frequent on our ſea-ſhores. C. Bauhine calls it, Soldanella maritima minor; J. Bauhine, Braſſica marina ſive Soldanella.

2. *Soldanella foliis cordatis.* **Sicilian ſea Bind-weed.**
Cordated-leaved Soldanella.

The root is a tuft of large fibres: the radical leaves ſtand on pedicles of about an inch in length; they are ſhort and broad, rounded at the extremity, and deeply cordated at the baſe, and uſually emarginated at the top, an inch and a half long, an inch broad, and of a duſky green, thick, ſucculent, and full of a milky juice. The ſtalks are in part procumbent, in part erect; where they lie upon the ground, they take root at every joint: where they are erect, they have leaves, ſomewhat like the radical ones in ſhape, but doubly auriculated, and, as it were, pinnated at the baſe; theſe ſtand alternately, on ſhort pedicles. The flowers are very large, and of a fine red, broader, in proportion to their length, than thoſe of the former.

This is frequent on the ſhores of Sicily. C. Bauhine calls it, Soldanella ſeu Braſſica maritima major.

MENYANTHES.

THE calyx is an erect, permanent perianthium, formed of one leaf, and divided into five ſegments at the edge: the corolla conſiſts of a ſingle petal; the tube is ſhort, and of a cylindric figure, but widening at top; the limb is deeply divided into five reflexo-patent, obtuſe, and hairy ſegments; the ſtamina are five ſhort, ſubulated filaments; the antheræ are acute, erect, and bifid at the baſe; the germen is conic; the ſtyle is cylindric, and nearly of the length of the corolla, and the ſtigma bifid and compreſſed. The fruit is an oval, unilocular capſule, ſurrrounded by the cup; the ſeeds are ſmall, numerous, and oval.

This genus comprehends the Menyanthes and Nymphoides of Tournefort, and the Acopa of Moriſon.

1. *Menyanthes foliis ternatis.* **Buck-bean.**
The trifoliate Menyanthes.

The root is long, white, jointed, and a third of an inch in diameter; it creeps under, or on, the ſurface, and ſends out fibres at every joint: the radical leaves ſtand on pedicles, four inches long, round, thick, green, and fungous within; on each of theſe pedicles ſtand three leaves; they are two inches long, an inch and a half broad, and reſemble, in ſome degree, the pinnæ of the bean leaf: the ſtalk grows to a foot high; it is thick, round, and of a pale green; on it's top ſtand a number of flowers, in a kind of thick ſpike; they are red, before they open, but, when open, white, very beautiful, and hairy.

It is common in wet grounds, with us. C. Bauhine and others call it, Trifolium paluſtre; Moriſon, Acopa.

2. *Menyanthes foliis ſubrotundis.* **Fimbriated Water-lily.**
Roundiſh-leaved Menyanthes.

The root is compoſed of a cluſter of thick, white fibres: the ſtalks are procumbent, and take root, as they lie upon the mud, ſending fibres from every joint; the leaves are large

large and roundiſh, thick, gloſſy, and of a deep green; they ſwim on the ſurface of the water, being affixed to long, round, and thick pedicles. The flowers ſtand alſo on long pedicles; they are large, yellow, hairy, and fimbriated at the edges of the ſegments; they do not at all reſemble the flowers of the nymphæa, but perfectly thoſe of the common menianthes, except in ſize and colour.

This a native of England, but it is not common; I found great plenty of it, this year, near Peterborough, in Northamptonſhire. Tournefort calls it, Nymphoides aquis innaſcens; C. Bauhine, Nymphæa lutea minor flore fimbriato. The leaves of this ſpecies are ſometimes ſpotted with purple, the flowers ſometimes white.

HOTTONIA.

THE calyx is a perianthium, formed of one leaf, divided into five linear, erect, patulous ſegments: the corolla conſiſts of a ſingle petal; the tube is of the length of the calyx; the limb is plane, and divided into five ovato-oblong, emarginated ſegments; the ſtamina are five ſhort, erect, ſubulated filaments, placed oppoſite to the ſegments of the corolla; the antheræ are oblong; the germen is globoſe, but acuminated; the ſtyle is filiform, and ſhort; the ſtigma is globoſe: the fruit is a globoſe, acuminated capſule, placed on the cup, and having only one cell; the ſeeds are numerous and round; the receptacle large and alſo round.

This genus comprehends the Hottonia of Boerhaave, and the Stratiotes of Vaillant, but not the Stratiotes of authors in general, that being a diſtinct genus.

Of this there is only one known ſpecies.

HOTTONIA. Water Violet.

The root is a cluſter of white fibres, moderately thick, and very long, deſcending deep into the mud: the radical leaves are pinnated, the pinnæ divided into long and narrow ſegments, and, as they lie expanded in the water, making a very beautiful appearance: the ſtalks which ſuſtain the flowers are round, ſlender, naked, and a foot, or more, in length; they are jointed, as it were, toward the top, and, at every joint, there ſtand four or five beautiful, moderately large, white flowers, diſpoſed in a radiated form, and placed on pedicles of an inch, or more, in length; they are white, and the apices in their center yellow.

It is frequent with us in ditches, and other ſhallow waters; the whole plant is generally immerſed in the water, the top, with the flowers, only being above the ſurface. C. Bauhine calls it, Millefolium aquaticum, ſive Viola aquatica caule nudo; Vaillant, Stratiotes vulgaris flore albo; Ruppius, Myriophyllum Rivini.

LYSIMACHIA.

THE calyx is an acute, erect, permanent perianthium, divided into five ſegments; the corolla conſiſts of a ſingle petal; the tube is ſcarce diſcernible; the limb is divided into five ovato-oblong ſegments; the ſtamina are five ſubulated filaments, nearly cohering at their baſes, and of about half the length of the corolla; the antheræ are acuminated; the germen is roundiſh; the ſtyle is filiform, of the length of the ſtamina; the ſtigma is obtuſe: the fruit is a capſule, of a globoſe figure, compoſed of two valves, and having only one cell; the ſeeds are numerous, and angulated; the receptacle globoſe, large, and punctated.

1. *Lyſimachia foliis lanceolatis racemo compoſito terminatrice.* Yellow Willow-herb.
The lanceolated-leaved, cluſter-flowered Lyſimachia.

The root is creeping, oblong, of the thickneſs of a finger, jointed, and of a reddiſh colour: the ſtalk grows to five feet high; it is ſtriated, hairy, firm, and of a pale green: the leaves ſtand three, four, or five at a joint; they are three inches long, an inch and a half wide, broadeſt in the middle, and terminate in a point; at the top of the main ſtalk and branches are ſpikes of very beautiful yellow flowers.

It grows in damp places, with us. C. Bauhine calls it, Lyſimachia lutea major; Rivinus, Nummularia erecta.

2. *Lyſimachia racemis ſimplicibus lateralibus.* Globoſe-flowered, yellow Willow-herb.

The Lyſimachia, with ſimple cluſters of flowers from the ſides.

The root is long, black, and creeping, frequently jointed, and of the thickneſs of a gooſe-quill: the ſtalk riſes to a foot high; it is ſtriated, hollow, ſlender, and brittle: the leaves grow two at a joint, and the joints ſtand very cloſe; the leaves are an inch and a quarter long, three quarters of an inch broad, and of a pale green: from the alæ of theſe grow pedicles, ſlender, and about an inch in length, on the ſummit of which ſtand roundiſh, or oval, cluſters of ſmall, yellow flowers, the whole cluſter of the bigneſs of a nutmeg.

It is frequent about lakes and rivers, in Denmark; we have it alſo in England, but very rare. C. Bauhine calls it, Lyſimachia bifolia flore globoſo; Linnæus, Lyſimachia ex alis foliorum thyrſifera; Rudbeck, Lyſimachia ſalicaria.

2. *Lyſimachia foliis ſubrotundis, floribus ſolitariis, caule repente.* Yellow Moneywort.

The creeping, round-leaved, ſingle-flowered Lyſimachia.

The root is compoſed of a few white fibres: the ſtalks trail upon the ground, and take freſh root at every joint; they are a foot, or more, in length: the leaves ſtand in pairs; they are roundiſh, of a bright green, and very thin: the flowers grow from the alæ of the leaves; they are very large, and yellow.

The whole plant makes a beautiful appearance, and is common with us in damp places. Tournefort calls it, Lyſimachia humifuſa rotundiore folio, flore luteo; C. Bauhine, Nummularia flore luteo.

The principal ſpecies, beſide theſe, are, 1. The willow-leaved, white-flowered Lyſimachia. 2. The great, broad-leaved, Canada Lyſimachia. 3. The little, purple Moneywort of authors. 4. The pointed-leaved Lyſimachia. 5. The narrow-leaved Lyſimachia, called Linum ſtellatum. 6. The oriental, purple-ſpiked Lyſimachia.

ANAGALLIS.

THE calyx is a permanent perianthium, divided into five carinated ſegments: the corolla conſiſts of a ſingle petal; there is no tube; the limb is plane, and is divided into five ſegments, of an ovato-orbicular figure, with convex ungues: the ſtamina are five erect filaments, ſhorter than the corolla, and hairy in the lower part; the antheræ are ſimple; the germen is globoſe; the ſtyle is filiform, and lightly declinate; the ſtigma is capitate; the fruit is a globoſe capſule, containing only one cell, and dividing horizontally into two hemiſpheres; the ſeeds are numerous, and angular; the receptacle globoſe and large.

1. *Anagallis foliis ovatis, indiviſis.* Red Pimpernel.

The oval, undivided-leaf Anagallis.

The root is ſmall, oblong, white, and furniſhed with a few fibres; the ſtalks grow to four or five inches long, ſometimes to ten or twelve; they are not erect, but trail on the ground, and are ſquare, ſmooth, of a pale green, and hollow: the leaves ſtand in pairs; they have no pedicles, but are an inch long, and more than half as much broad, of a duſky green on the ſurface, and ſpotted with red underneath. The flowers ſtand on ſlender pedicles, of an inch long, growing out of the alæ of the leaves; they are ſmall and red, with us, ſometimes white; in many other parts of Europe they are blue.

The plant is common in our corn-fields and gardens. C. Bauhine calls it, Anagallis flore Phœniceo. It is eſteemed an alexipharmic and ſudorific, but is little uſed.

2. *Anagallis foliis lanceolatis.*
Lanceolate-leaved Anagallis.

The root is a cluſter of white fibres; the ſtalks are a foot, or more, in length, of a pale green, and hollow: the leaves ſtand uſually two, ſometimes three, ſometimes, but rarely, more, at a joint; they are oblong, very narrow, and lanceolated. The flowers ſtand on long pedicles, produced from the alæ of the leaves, uſually one from each; the flowers are larger than thoſe of the former ſpecies, and of a beautiful blue.

The place whence this plant originally came is unknown; Monellus ſent Cluſius ſome ſeeds of it from Cadiz, and, from the plants raiſed from them, the ſtock has been ever ſince kept up in our gardens.

DIAPENSIA.

THE calyx is a perianthium, compoſed of eight leaves; the five interior ones diſpoſed in a circle, the other three laid in an imbricated manner, all of them equal in ſize, of an oval figure, obtuſe, erect, and permanent: the corolla conſiſts of a ſingle petal, and is of the hypocrateriform kind; the tube is cylindric, open, and of the length of the cup; the limb is divided into five ſegments, obtuſe and plane; the ſtamina are five erect, linear, compreſſed filaments, ſhort, and placed at the ſegments of the petal; the antheræ are ſimple; the germen is roundiſh; the ſtyle is cylindric, and of the length of the ſtamina; the ſtigma obtuſe: the fruit is a capſule, formed of three valves, containing three cells, and the ſeeds are numerous and round.

Of this genus there is but one known ſpecies.

DIAPENSIA.

The root conſiſts of a number of white fibres, and is perennial: the radical leaves are very numerous, very narrow, obtuſe, and linear, extremely thin, and of a pale green colour: the ſtalk is procumbent, an inch or two long, and ramoſe, producing tufts of leaves, and cluſters of fibres at every joint; the peduncles which ſupport the flowers are ſlender, naked, ſcarce an inch in length, and of a pale green colour; every peduncle ſuſtains only a ſingle flower, which is large and white.

It is a native of Denmark, Sweden, and Lapland, and we have it on ſome of the Northern mountains in our own kingdom. C. Bauhine calls it, Sedum Alpinum gramineo folio, lacteo flore. Tournefort, Androſace Alpina perennis flore ſingulari.

HYDROPHYLLUM.

THE calyx is a perianthium, divided into five ſubulated ſegments, patent, permanent, and nearly as long as the corolla: the corolla conſiſts of a ſingle, campanulated petal, lightly divided into five erect, obtuſe, emarginated ſegments: the nectarium is a fiſſure, cloſed by two longitudinal, connivent lamellæ, ſituate between the ſegments, and below the middle of the petal: the ſtamina are five ſubulated filaments, longer than the corolla; the antheræ are incumbent, and oblong; the germen is of an ovato-acuminated figure: the ſtyle is ſubulated, and of the length of the ſtamina: the ſtigma is bifid, acute, and patent. The fruit is a globoſe capſule, formed of two valves, and having only one cell: the ſeed is ſingle, round, and large.

This genus comprehends the Hydrophyllum of Tournefort, and the Dentariæ facie of Moriſon.

There is only one known ſpecies of it.

HYDROPHYLLUM.

The root is oblong, moderately thick, and of a reddiſh colour: the radical leaves are pinnated, ſmall, but like thoſe of the dentaria, conſiſting of two or three pair of oblong pinnæ, and a long, terminatory one, or rather of ſo many deep ſegments, reſembling pinnæ, for they are not divided quite to the rib: the ſtalk is round, ſlender, and of a pale green colour; it grows to ſix inches high, and has on it's top five

or

or ſix flowers, large, and much like thoſe of the echium; the colour a deep blue, ſometimes a pale blue, ſometimes red, ſometimes white.

It is a native of Germany, and grows in moiſt places. Morinus gave it the name of Hydrophyllon; others have called, it Dentariæ affinis, echii flore.

THEOPHRASTA.

THE calyx of the Theophraſta is a ſmall, permanent perianthium, divided into five obtuſe ſegments, making obtuſe angles alſo with one another: the corolla conſiſts of a ſingle petal, of a campanulated figure, divided, in the manner of the cup, into five obtuſe ſegments at the rim: the ſtamina are five ſubulated filaments, ſhorter than the corolla: the antheræ are ſimple: the germen is oval: the ſtyle is ſubulated, and ſhorter than the corolla: the ſtigma is acute. The fruit is a large, globoſe capſule, containing only one cell: the ſeeds are numerous, and of a roundiſh figure, and are affixed to every part of the receptacle.

This genus comprehends the Ereſia of Plumier; it is an American, of which there is but one ſpecies, and that wanting no farther deſcription.

PATAGONULA.

THE calyx is a very ſmall, permanent perianthium, divided into five ſegments: the corolla is compoſed of a ſingle petal: there is ſcarce any tube: the limb is plane, and divided into five oval, acute ſegments: the ſtamina are five filaments, of the length of the corolla: the antheræ are ſimple: the germen is of an oval, acute figure: the ſtyle is bifid at the end, and it's diviſions are bifid again; it is of the length of the ſtamina, and permanent: the ſtigmata are ſimple. The fruit is an oval, acuminated capſule, placed on a very large cup, with oblong, emarginated ſegments; this conformation of the cup is the eſſential diſtinction of the genus.

There is but one ſpecies of this genus; it is an American, and needs no farther deſcription than is contained in the generical character.

SPIGELIA.

THE calyx is a monophyllous perianthium, ſmall, permanent, and divided into five ſegments: the corolla conſiſts of a ſingle petal, of the ſhape of a funnel: the tube is much longer than the cup, and is narrower below than above: the limb is patent, and divided into five ſegments; the ſegments broad, and acuminated: the ſtamina are five ſimple filaments; the antheræ are ſimple: the germen is compoſed of two globes: the ſtyle is ſingle, ſubulated, and of the length of the tube: the ſtigma is ſimple: the perianthium conſiſts of two globoſe fruits, growing together, and ſituate on the cup: the ſeeds are roundiſh, very ſmall, and numerous.

This genus comprehends the Arapabaca of Plumier; an American, needing no farther deſcription than is contained in the generical character.

AZALEA.

THE calyx is a ſmall, erect, acute, coloured, and permanent perianthium, divided at top into five ſegments: the corolla conſiſts of a ſingle petal; this is twice as long as the cup, and is erect, patulous, narrow at the baſe, and at the ſummit divided into five ſegments, the ſides of which bend backwards: the ſtamina are five filiform filaments, inſerted into the receptacle, and free: the antheræ are ſimple: the germen is roundiſh: the ſtyle is filiform, of the length of the corolla, and permanent: the ſtigma is obtuſe. The fruit is a roundiſh capſule, formed of five valves, and containing five cells: the ſeeds are numerous, and roundiſh: the figure of the petal is, in ſome, infundibuliform, in ſome campaniform.

1. *Azalea ramis diffuſis procumbentibus.*
The diffuſe, procumbent Azalea.

The root is woody, fibrous, and perennial: the ſtem is woody, and of the thickneſs of a gooſe-quill; it ſoon divides into a number of branches, and theſe, as well as itſelf, all lie on the ground, ſpread in an irregular manner. The whole plant ſeldom exceeds ten or twelve inches in length, and often is as much in extent: the leaves ſtand in pairs, very cloſe to each other; they are of the ſize and ſhape of thoſe of thyme, and are green all winter; they ſtand on very ſhort pedicles, and their edges are reflex; they are of a deep green on the upper ſurface, paler below, and have a hollow, longitudinal line on the upper ſurface, and a prominent one below, formed by the main rib. The flowers uſually ſtand three together, at the ends of the branches, each on it's own ſhort, red pedicle. The calyx is red; the flower moderately large, and of a bright red.

It is frequent in Denmark, Sweden, and Lapland, over-running whole tracts of land, as the erica does with us. The whole plant lies as flat on the earth as a preſſed ſpecimen in a hortus ſiccus, yet it does not take root from the branches. Tournefort calls it, Chamærhododendros Alpina ſerpyllifolia; Rudbeck, Lychnis Alpina fruteſcens minima flore ruberrimo; C. Bauhine, Anonymus fruticoſa foliis ericæ baccifera.

2. *Azalea ramis compoſitis ſuberectis.*
The compoſite, and erect-branched Azalea.

The root is fibroſe, woody, and perennial: the ſtem is woody, tough, and ſhrubby: it grows to ſix or eight inches high. The branches are numerous, and three or four often grow from the ſame point of the ſtem, from the top of the branch of the preceding year; they ſtand very diſtant, and are covered with a rough bark, which, after a time, falls off, a new one appearing under it ready formed: the leaves are ſmall, of an elliptic figure, rigid, and have their edges bent backward. The middle rib forms a cavity on the upper ſurface of the leaf, and is prominent below; the upper ſurface is of a deep green, ſprinkled over, as it were, with hard, round prominencies: the under ſurface is whitiſh, and has more of theſe protuberances, but they are very ſmall, and of a ferrugineous colour. The leaves ſtand in cluſters, ten or twelve together, at the tops of the branches, the other part being naked. The flowers riſe from the midſt of theſe tufts, uſually three from each; they are long, and of a beautiful bluiſh-purple, or violet, colour, and ſtand each on a ſhort, reddiſh pedicle: the calyx is green.

This beautiful plant is a native of the mountains of Lapland. Linnæus, who diſcovered it, ſuppoſed it, at that time, to be the Chamærhododendros Alpina glabra of Tournefort, the Ledum Alpinum foliis ferruginea rubigine nigricantibus; but he afterwards allowed this to be an error, and the plant a new ſpecies.

OPHIORRHIZA.

THE calyx is an erect perianthium, ſmall, and divided into five ſegments at the edge: the corolla is oblong, narrow at the baſe, and divided alſo into five ſhort ſegments at the edge: the ſtamina are five moderately long, ſlender filaments: the antheræ are tumid and ſhort: the germen is bifid: the ſtigmata are two, and the fruit a capſule conſiſting of two lobes; the ſeeds are numerous, and roundiſh.

This plant approaches greatly to the azalea, but it's bifid germen and bilobous fruit ſufficiently diſtinguiſh it both from this and all the other genera of this claſs.

PLUMBAGO.

THE calyx is a ſcabrous, pentagonal perianthium, formed of one leaf, of an ovato-oblong, tubulated figure, divided into five ſegments at the extremity, and permanent: the corolla conſiſts of a ſingle petal, of an infundibuliform ſhape: the tube is cylindric, but narroweſt above, and longer than the cup: the limb is divided into five oval, erecto-patent ſegments: the ſtamina are five ſubulated filaments, free, and placed within the tube of the corolla, and annexed, at their baſes, to as many obtuſe ſquammæ: the antheræ are ſmall, oblong, and verſatile: the germen is oval, and very ſmall: the ſtyle is ſimple, and of the length of the tube: the ſtigma is ſlender, and divided into five parts: there is no pericarpium: the ſeed is ſingle, of an oval figure, and included.

Plumbago foliis petiolatis.
The Plumbago, with petiolated leaves.

The root is oblong, moderately thick, and of a very acrid taſte; the radical leaves are roundiſh, three inches long, and of a deep green colour: the ſtalk riſes to three or four feet high, but is not very robuſt, and ſeldom perfectly erect. It is round, articulated, woody, but tortuous, and of a green, ſhining ſurface: it uſually grows among ſhrubs, and is, in part, ſupported upright by them. The leaves ſtand on the ſtalks, on very ſhort pedicles; they are roundiſh, ſometimes rather oblong, two inches in length, and of a deep ſhining green, ſmooth on the ſurface, and very thin: the flowers ſtand in ſpikes at the top of the ſtalk and branches; they have no pedicles, but adhere by the baſe of the cup, which is viſcous, ſtriated, and, as it were, ſpinoſe; the flowers are white, and much like thoſe of the common white Lychnis, only ſomewhat ſmaller.

It is a native both of the Eaſt and Weſt Indies; we have it frequently in our gardens. Ray calls it, Dentillaria lychnoides ſylvatica ſcandens flore albo; Commelin, Lychnis Indica ſpicata fructibus lappaceis oblongis, radice urente.

The other ſpecies of the Plumbago are, 1. The beet-leaved, American Plumbago; and, 2. The ſmaller-leaved, ſcandent, and prickly, American Plumbago, with ſmaller flowers.

PHLOX.

THE calyx is a cylindric but decangular perianthium, formed of a ſingle leaf, divided into five ſegments at the edge, and permanent: the corolla conſiſts of a ſingle petal, and is of the hypocrateri-form kind: the tube is cylindric, and three times the length of the cup, narrow below and crooked: the limb is plane, and divided into five roundiſh, equal, obtuſe ſegments, ſhorter than the tube: the ſtamina are five filaments placed in the tube of the flower, two of which are longer, one ſhorter than the other two: the antheræ are placed in the mouth of the corolla: the germen is conic; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is trifid and acute: the fruit is an oval, but ſomewhat trigonal, capſule, formed of three valves, and containing three cells; the ſeeds are ſingle and oval.

This genus comprehends the Lychnidea of Dillenius.

1. *Phlox foliis lineari-lanceolatis caule recto, corymbo terminali.*
The narrow, lanceolate-leaved Phlox, with a cluſter of flowers terminating the ſtalk.

The root is oblong, ſlender, white, and furniſhed with a few fibres; the radical leaves are three inches long, narrow, and pointed at the ends, of a pale green colour, and thin: the ſtalk is round, ſmooth, and robuſt; it riſes to two feet high, and toward the top has ſome branches: the leaves ſtand two at a joint; they are an inch and a half long, narrow, and pointed at the ends, of a very pale green, and ſmooth on the ſurface: the flowers ſtand in a kind of umbels at the tops of the ſtalks and branches; they are large and white, ſometimes reddiſh.

The plant is common in Virginia, and many other parts of North America; we have it in our gardens. Dillenius calls it, Lychnidea folio melampyri.

2. *Phlox foliis ovatis, corymbo terminatrice.*
The oval-leaved Phlox, with terminatory cluſters of flowers.

The root is oblong, thick, and woody, white, and furniſhed with a number of fibres. The radical leaves are four inches long, very numerous, of a pale green, ſmooth and even at the edges, and near three inches in breadth: the ſtalk riſes to two or three feet high: the leaves ſtand in pairs, at three or four inches diſtance; they are of an oval figure, and obtuſely pointed, two inches and a half long, and more than an inch and a half in breadth. The ſtalk towards the top ſends out ſix or eight branches in pairs, oppoſite

oppoſite to each other, from the alæ of the leaves: theſe all riſe to the height of the main ſtalk, and are terminated by cluſters of large white flowers, together forming a ſurface, often of ten or twelve inches.

This is frequent in Penſylvania, whence we have often received it from John Bartram.

CONVOLVULUS.

THE calyx is a very ſmall perianthium, of an obtuſe, oval, connivent figure, formed of one leaf, divided into five ſegments. The corolla conſiſts of a ſingle petal; the ſhape is campanulated and patent; it is large, plicated, and very lightly divided at the rim. The ſtamina are five ſubulated filaments, of about half the length of the corolla; the antheræ are oval and compreſſed: the germen is roundiſh; the ſtyle is filiform, and of the length of the ſtamina: the ſtigmata are two, oblong and broad. The fruit is a capſule of a roundiſh figure, contained within the cup, and formed of one, two, or three valves: the ſeeds are two, roundiſh and often acute: the corolla is uſually cut in ten places; but there are ſpecies, in which theſe crenæ are but five.

This genus comprehends the Convolvulus of authors, and the Volubilis of Dillenius. The Volubilis has in a cluſter ſome larger, others ſmaller, flowers; and the ſeeds are elated, but theſe are ſpecific, not generical, diſtinctions.

1. *Convolvulus foliis ſagittatis poſtice truncatis.* **Great Bind-weed.**
The Convolvulus, with ſagittated leaves truncated behind.

The root is oblong, white, and creeping, of the thickneſs of a crow-quill, and of an acrid taſte: the ſtalks are round, ſlender, and infirm, but by the help of buſhes, on which it climbs, they grow ſometimes to eight or ten feet high: the leaves ſtand ſingly, and at conſiderable diſtances; their pedicles are an inch long; they are broad, ſagittated at the baſe, and terminate in a point: their colour is a pale green, their texture thin, and the two points at the baſe are truncated. The flowers ſtand ſingly on long pedicles, ariſing from the alæ of the leaves; they are very large, and of a ſnow white.

The plant is common in our hedges. C. Bauhine calls it, Convolvulus major albus.

2. *Convolvulus calycibus tuberculatis piloſis.* **Round-leaved, blue Bindweed.**
The Convolvulus, with tuberculoſe, hairy cups.

The root is oblong, creeping, of a reddiſh colour, and of the thickneſs of a crow-quill: the ſtalk is round, ſlender, and tortuous, hairy, and uſually of a reddiſh colour, and, when properly ſupported, will grow to four or five feet high: the leaves ſtand ſingly, and at conſiderable diſtances on the ſtalks; they have pedicles of an inch long, reddiſh and hairy: their ſhape is very uncertain; they are ſometimes roundiſh, ſometimes angulated, like the leaves of ivy, and this in a greater or leſſer degree: they are always of a pale green and hairy, both on the upper and under ſurfaces. The flowers are diſpoſed in a very ſingular manner; a common pedicle of three inches long riſes from the ala of a leaf, and at the top of this ſtand three other pedicles, each an inch long, and each ſupporting a ſingle flower: the flowers are large, and of a beautiful purple colour: the cups blackiſh, hairy, and full of little tubercles: the flowers are only open in the morning and evening; they ſhut up, when the ſun is out: hence ſome have called the plant Flos noctis.

It is a native of Syria, and many other of the warmer countries. It's leaves differ ſo extreamly in figure, that they have miſled many authors into the deſcribing the plant three times over, as if of ſo many different ſpecies. C. Bauhine calls it, in the round-leaved ſtate, Convolvulus purpureus folio ſubrotundo; in it's angulated-leaved ſtate, Convolvulus hederaceus cæruleus anguloſo folio; and Dillenius, when the leaves are yet more angulated, calls it, Convolvulus cæruleus hederaceo folio magis anguloſo. It uſually has round leaves in Syria; ivy-like leaves in many parts of Aſia, Africa, and America; and the more angular-leaved plants have been from Æthiopia. What

ſhews,

ſhews, however, that theſe are only varieties of the ſame ſpecies, is, that the leaves alter their form, even in our own ſtoves.

3. *Convolvulus foliis lanceolato-ovatis nudis, caule recto, floribus ſolitariis.*

The Convolvulus, with oval-lanceolated, naked leaves, an erect ſtalk, and ſingle flowers.

The root is oblong, ſlender, and of a browniſh colour: the ſtalks are numerous, round, and firm; they grow to a foot, or eighteen inches, in height, and ſtand erect; they are hairy, and divided into many branches. The leaves ſtand ſingly, but very cloſe to one another; they are oblong, and moderately broad: the lower ones are often four inches long, and an inch and a half broad; they grow ſmaller as they come nearer the top of the ſtalk, and are a little hairy. From the alæ of almoſt every leaf there riſes a pedicle very ſlender, and near an inch long; on the top of which ſtands a ſingle, large, and very beautiful blue flower, but variegated in a very elegant manner: about the edges the blue is very deep; within it is ſomewhat paler, farther toward the center of the flower it becomes yellow, and the very central ſpot is white.

It is a native of Spain and Portugal; but we have it frequent in our gardens. C. Bauhine calls it, Convolvulus cæruleus peregrinus folio oblongo. Moriſon, Convolvulus flore triplici colore inſignito.

The other ſpecies of the Convolvulus are very numerous: the more ſingular are, 1. The auriculate-leaved, purple Convolvulus. 2. The white Indian Colvolvulus. 3. The violet-leaved Convolvulus. 4. The yellow, many-flowered Convolvulus. 5. The round-leaved, white Convolvulus. 6. The great purple, heart-leaved, American Convolvulus. 7. The thick-leaved, Ceylon Convolvulus. 8. The little, field Convolvulus. 9. The little, branched Convolvulus. 10. The little African Convolvulus. 11. The Syrian Convolvulus. 12. The linear-leaved, erect Convolvulus. 13. The creeping, ſilvery, acaulous Convolvulus. 14. The umbellated, erect, ſilvery Convolvulus. 15. The piloſella-leaved Convolvulus. 16. The nummularia-leaved Convolvulus. 17. The great, alated, Indian Convolvulus. 18. The laciniated-leaved Convolvulus. 19. The cinque-foil Convolvulus. 20. The tripartite-leaved Convolvulus. 21. The betony-leaved Convolvulus. 22. The laciniated, ſilvery-leaved Convolvulus. 23. The ſagittated, Græcian Convolvulus. 24. The broad-leaved, erect, hairy Convolvulus. 24. The oblong, hairy-leaved Convolvulus, with bright red flowers.

IPOMOEA.

THE calyx is a very ſmall, oblong perianthium, divided into five ſegments, and permanent: the corolla conſiſts of a ſingle petal, of an infundibuliform ſhape; the tube is nearly cylindric, and very long; the limb is patent, and is divided into five ſemi-lanceolate, plane ſegments: the ſtamina are five ſubulated filaments, nearly of the length of the corolla: the antheræ are roundiſh: the germen is roundiſh; the ſtyle is filiform, and of the length of the corolla; the ſtigma is capitate and trifid: the fruit is a roundiſh capſule, containing three cells: the ſeeds are oval, and are ſeveral in each cell.

1. *Ipomoea foliis pinnatifidis linearibus, floribus ſolitariis.* American Jaſmine.

The linear, pinnatifid-leaved Ipomoea, with ſingle flowers.

The root is oblong, creeping, and woody: the ſtalks are woody, and grow to a great length; they are weak, however, and muſt be ſupported. The leaves ſtand ſingly on long pedicles, of a deep red colour; they are very beautifully divided into a number of oblong, and very narrow, ſegments, down almoſt to the middle rib, ſo as to appear pinnated. The number of ſegments is often very great, and the whole leaf is terminated by a ſingle ſegment or point: the flowers are large, and of a beautiful bright red colour.

It

It is a native both of the East and West Indies. J. Bauhine and others call it ſimply, Quamoclit; Columna, Convolvulus pennatus exoticus rarior; C. Bauhine, Jaſminum millefolii folio.

2. *Ipomoea foliis palmatis, lobis ſeptenis lanceolatis integerrimis.* Spaniſh Wood-bine.

The palmated-leaved Ipomoea, with ſeven whole lanceolated lobes.

The root is tuberous, roundiſh, and of the bigneſs of a man's head: the ſtalk is angular, firm, and tortuous; it winds itſelf about trees, and grows thus to twenty feet high: it is very much branched, and of a browniſh colour. The leaves ſtand ſingly at four inches diſtance from one another: their pedicles are two inches, or more, in length; the leaf is divided into ſeven oblong ſegments; they are narroweſt at the baſe, broader in the middle, and thence ſmaller again to the point: the middle ſegment is four inches long, and an inch broad; the others are gradually ſmaller, as they recede from it: the flowers are large, of a bright yellow colour, very beautiful, and ſweet-ſcented: they ſtand ſingly on pedicles of three or four inches long, ariſing from the alæ of the leaves.

It is a native of Jamaica, but we have it in ſome of our ſtoves. Sir Hans Sloane calls it, Convolvulus major heptaphyllus flore ſulphureo odorato.

The other ſpecies of Ipomoea are, 1. The cordated-leaved, many-flowered Ipomoea. 2. The hairy-ſtalked, digitated-leaved Ipomoea. 3. The ſcarlet, digitated, narrow-leaved Ipomoea. 4. The great cordated-leaved Ipomoea. 5. The umbellated, ſcarlet Ipomoea. 6. The angulated-leaved, ſmall, ſcarlet-flowered Ipomoea. 7. The ſolanum-leaved Ipomoea, with ſcarlet flowers.

POLEMONIUM.

THE calyx is a cyathiform perianthium, compoſed of a ſingle leaf, divided into five ſegments, acute and permanent: the corolla conſiſts of a ſingle petal; the tube is ſhorter than the cup, and is ſhut up by five valves placed at it's top; the limb is large and plane, divided into five roundiſh, obtuſe ſegments: the ſtamina are five filaments, inſerted in the valves of the tube; they are filiform, inclinated, and ſhorter than the corolla. The antheræ are roundiſh and incumbent; the germen is of an oval figure, and acute; the ſtyle is filiform, and of the length of the corolla; the ſtigma is bifid and revolute: the fruit is a trigonal, covered capſule, approaching toward an oval form, compoſed of three valves, and containing three cells: the ſeeds are numerous, irregular, and acute.

Of this genus there are only two known ſpecies.

1. *Polemonium calycibus glabris.* Jacob's Ladder.

The ſmooth-cupped Polemonium.

The root is oblong, ſlender, whitiſh, pyxidated, and creeping: the radical leaves are very beautifully pinnated; they are four or five inches long, and are compoſed of twelve, or more, pairs of pinnæ, placed very cloſe to one another, and terminated by an odd one: the pinnæ are half an inch long, and moderately broad, pointed at the end, and of a deep green colour; theſe leaves remain green the whole winter. The ſtalk is moderately thick, of a pale green colour, ſtriated and hollow; it uſually runs up ſingly to two feet high, and near the top ſends out ſome lateral branches: the leaves ſtand alternately, and are three inches long, and an inch and a quarter broad in the whole. They are beautifully pinnated like the radical leaves; the pinnæ very thick-ſet, broadeſt at the baſe, and narrower to the point. At the top of the ſtalk and branches ſtand cluſters of very beautiful flowers, large, of a deep blue, and ſometimes a white, colour.

It is a native of Denmark, Sweden, and other northern countries; I have met with it wild in Lancaſhire, but would not be too confident that it was native there, as we have it frequently in our gardens, and it might be thrown out of ſome of them. Tour-

nefort calls it, Polemonium vulgare cæruleum; C. Bauhine and others, Valeriana Græca.

2. *Polemonium calycibus lanatis.*
The woolly-cupped Polemonium.

The root is compoſed of a multitude of long fibres moderately thick, and very tough; the radical leaves are ſix inches long, and compoſed of a great number of pairs of pinnæ, ſet crowding on one another with an odd pinna at the end; they are about half an inch long, not a third of an inch broad, and pointed at the end. The ſtalk is round, ſmooth, ſlender, hairy, and hollow; it uſually grows ſingle, and is about a foot and half high. All the way up there ſtand pinnated leaves, like the radical ones, but much ſmaller; the upper ones very ſmall. The flowers ſtand in cluſters, and are of a beautiful blue colour; they are twice as large as thoſe of the former ſpecies, and their cups make a ſingular appearance, being woolly and white.

It is a native of Siberia, and has not been deſcribed before. Linnæus mentions it, under the name of Polemonium calycibus lanatis.

Claſs the Fifth Order the Firſt.

Diviſion the Third.

Pentandria Monogynia, with monopetalous flowers, and the germen placed under the corolla.

CAMPANULA.

THE calyx is a perianthium, divided into five parts, erecto-patent, acute, and placed on the germen: the corolla conſiſts of a campanulated, ſingle petal, the baſe broad and impervious: the limb lightly divided into five ſegments, broad, acute, and patulous: the nectarium is ſituate in the bottom of the corolla, and is formed of five acute, connivent valves: the ſtamina are five very ſhort, capillary filaments, inſerted on the ſummits of the valves, which form the nectarium: the antheræ are longer than the filaments, and compreſſed: the germen is angular, and placed below the receptacle; the ſtyle is filiform, and longer than the ſtamina: the ſtigma is oblong, thick, divided into three parts, and thoſe bent backwards. The fruit is an angulated capſule, of a figure approaching to round, containing either three or five cells, and having ſo many foramina in the ſides for letting out the ſeeds. The ſeeds are numerous and ſmall, and the receptacle fixed and columnar.

This genus comprehends the Campanula, Trachelium, Rapunculus and Medius of Knaut, and the Speculum Veneris. The figure of the pericarpium is not perfectly determinate: in the Trachelium it is ſcabrous, hairy, and trilocular; in the Rapunculus it is ſmooth, oval, and trilocular; in the Medius it has five valves, and is quinquelocular; and, in the Speculum Veneris, it is columnar, priſmatic, and trilocular. As the reſt of the characters, however, are alike in all, theſe can properly be only made ſpecific diſtinctions, not generical, as Ray, Knaut, and others have made them.

1. *Campanula foliis radicalibus reniformibus, caulibus linearibus.* Round-leaved Bell-flower.
The Campanula, with the radical leaves kidney-ſhaped, the others linear.

The root is oblong, thick, white, and of a pleaſant taſte: the radical leaves are eight or ten in number; they are of a roundiſh, or rather kidney-like, ſhape, of the breadth of a ſixpence, of a deep green colour, and have pedicles of an inch long: the ſtalk is round, ſmooth, and ſix or eight inches high; at the bottom it has four or five leaves of an angulated, oblong figure, ſomewhat like thoſe of ivy; the reſt are placed irregularly, all the way up the ſtalk, pretty cloſe to one another; they have no reſemblance of the radical or lower leaves, but are an inch long, narrow, graſſy, and pointed

pointed at the ends; at the top of the ſtalk ſtand four or five flowers, large, and of a beautiful blue, ſometimes a reddiſh, ſometimes a white, colour.

It is common with us by way-ſides. C. Bauhine calls it, Campanula minor rotundifolia vulgaris; and, deſcribes twice afterwards, under the names of Campanula minor rotundifolia floribus albis, and Campanula Alpina linifolia cærulea.

2. *Campanula foliis lanceolatis, caulinis acute ſerratis, floribus paniculatis nutantibus.*

The lanceolated, ſerrated-leaved Campanula, with nutant, paniculated flowers.

The root is oblong, white, moderately thick, and eſculent; the radical leaves ſtand on pedicles of three inches long; they are two inches and a half long, an inch and a half broad, pointed at the extremity, and of a deep green colour. The ſtalk is rigid, hollow, and two feet high: the leaves ſtand ſingly on it; their pedicles are moderately long; their ſhape like that of the common ſtinging nettle, but narrower; they are ſharply ſerrated at the edges, and, before the flowers appear, there is a tuft of theſe leaves on the ſtalks like a roſe, but theſe, when the flowers are ripe, are diſpoſed, like the reſt, along the ſtalk: they are all ſmooth, of a deep green colour, and rigid to the touch: the flowers ſtand in a kind of panicles; they are ſmall, blue, and nutant.

This is a native of Ruſſia, but we have it in ſome of our gardens. Amman calls it, Campanula urticæ foliis anguſtioribus glabris rigidiſque.

3. *Campanula capſulis quinquelocularibus tectis, calycis ſinubus reflexis.* **Coventry Bells.**

The quinquelocular fruited, long-leaved Campanula.

The root is large and oblong, white, eſculent, and of a very pleaſant taſte; the radical leaves are oblong, moderately broad, crenated at the edges, and terminate in a point: they ſtand on pedicles of two inches long, and are of a pale green, and hairy: the ſtalk grows to three feet high: the leaves ſtand irregularly on it, and are oblong, narrow, hairy, and crenated like thoſe of the root; the tops of the branches ſupport a number of flowers, large, oblong, ventricoſe, and of a beautiful blue, ſometimes purpliſh, and ſometimes white, colour.

It is a native of Germany and Italy, and is very common in our gardens. Camerarius calls it, Medium; Dodonæus, Viola Mariana; C. Bauhine, Campanula hortenſis folio et flore oblongo.

4. *Campanula foliis undatis, radicalibus lanceolato-ovatis paniculâ coarctata.* **Rampions.**

The undulated-leaved Campanula, with a narrow panicle.

The root is long, white, and thick, ſometimes ſimple, ſometimes multiple: the radical leaves are numerous, oblong, broad, and of a bright green colour: the ſtalk riſes to two or three feet; it is ſlender, ſtriated, angular, and hairy: the leaves ſtand thick upon it without any order; they are long and narrow, broad at the baſe, where they adhere to the ſtalk without any pedicle, and thence gradually narrower to the point, and very finely ſerrated at the edges: toward the top the ſtalk ſends up many branches, and at the tops of theſe ſtand the flowers; they are large, beautiful, and of a fine blue, with lines of red; they are deeply divided into five ſegments, and each ſegment has three red lines or ſtriæ on it: the whole plant is full of a milky juice; it's root is eaten raw.

It is a native of Germany, but is frequent in our gardens. C. Bauhine calls it, Rapunculus eſculentus; Dodonæus, Rapunculum.

5. *Campa-*

5. *Campanula caule angulato, calycibus pedunculatis simplicibus, laciniis ciliatis.* **Canterbury Bells.**

The angular-ſtalked Campanula, with ſingle pedunculated cups, with ciliated ſegments.

The root is oblong, white, and eſculent; the radical leaves are large, broad, cordated, and ſerrated at the edges: the ſtalk is large, angular, hairy, and two or three feet high: the leaves ſtand alternately on it, and much reſemble thoſe of the common ſtinging nettle; the lower ones have long pedicles, the upper ſhorter: the flowers ſtand on pedicles ariſing from the alæ of the leaves; they are large, blue, and hairy within.

We have this, in many parts of England, by road-ſides, and in dry paſtures. Cluſius calls it, Trachelium vulgare; Dodonæus, Cervicaria major; C. Bauhine, Campanula foliis urticæ.

6. *Campanula caule ſubdiviſo, foliis oblongis crenatis, calycibus corolla longioribus.* **Venus Looking-glaſs.**

The divided-ſtalked, oblong, crenated-leaved Campanula, with long cups.

The root is ſmall, oblong, white, ſingle, and furniſhed with large fibres: the radical leaves are an inch long, near half an inch broad, and crenated at the edges: the ſtalk is weak, eight or ten inches high, and divided into ſeveral branches, almoſt immediately from the root, and theſe often divided again into others: the leaves ſtand irregularly; they are ſhort, ſmall, crenated round the edges, and obtuſe at the ends: the flowers grow from the alæ of the leaves; they are large, and of a beautiful purple colour.

It is a native of England, and is frequent in the corn-fields of ſome parts of the kingdom. Ray calls it, Speculum Veneris; C. Bauhine, Campanula arvenſis erecta.

The other ſpecies of Campanula are very numerous. The principal are, 1. The great, broad-leaved, blue Campanula. 2. The narrower, nettle-leaved Campanula. 3. The tall, pyramidal Campanula. 4. The tuberous, atriplex-leaved Campanula. 5. The hoary-leaved Campanula. 6. The Spaniſh Campanula, with divided leaves. 7. The long, livid-leaved, Alpine Campanula. 8. The round-headed Campanula. 9. The teucrium-leaved Campanula. 10. The echium-leaved, hairy-flowered Campanula. 11. The tragopogon-leaved Campanula. 12. The peach-leaved Campanula. 13. The ſingle-flowered Campanula. 14. The patulous-flowered, rigid-leaved Campanula. 15. The daiſy-leaved Campanula. 16. The flax-leaved Campanula. 17. The ivy-leaved Campanula. 18. The ſerpyllum-leaved Campanula. 19. The divided-leaved Campanula. 20. The great-pentagonal Campanula, with long and broad leaves. 21. The perfoliate, pentagonal Campanula. 22. The pyramidal-ſpiked Campanula. 23. The corniculate Campanula. 24. The ſcabious-headed Campanula. 25. The procumbent, long-flowered Campanula. 26. The long, divided-leaved Campanula. 27. The round-leaved, ſmall-flowered Campanula. 28. The laciniated-leaved Campanula, with hard, woolly fruit. 29. The ragwort-leaved Campanula. 30. The ſingle-flowered, lychnis-leaved Campanula. 31. The crenated-leaved, patulous-flowered Campanula. 32. The poppy-headed Campanula. 33. The dwarf Campanula, with flowers only on one ſide.

ROELLA.

THE calyx is a permanent perianthium, formed of one leaf of a turbinated figure, divided into five large lanceolated, acute, dentated ſegments, and placed on the germen: the corolla conſiſts of a ſingle petal, and is deciduous; it is of an infundibuliform ſhape. The tube is a little ſhorter than the cup: the limb is erecto-patent, divided into five parts, and longer than the cup: the nectarium is formed of five ſquammæ, placed in the bottom of the flower, and connivent: the ſtamina are five ſubulated filaments, ſituate on the nectarium: the antheræ are ſubulated and connivent,

nivent, of the length of the filaments, and of the height of the cup: the germen is oblong, and placed under the receptacle of the flower: the ſtyle is filiform, and of the length of the ſtamina: the ſtigmata are two, oblong, depreſſed, and patent: the fruit is a cylindric capſule, ſhorter than the cup, compoſed of a ſingle valve, but containing two cells, and coronated with the cup, grown larger than at firſt: the ſeeds are numerous and angular.

PHYTEUMA.

THE perianthium is formed of a ſingle leaf, divided into five ſegments, erecto-patent, and placed on the germen: the corolla is compoſed of a ſingle petal, ſtellated, patent, and divided into five parts; the ſegments of a linear figure, acute and bent backwards. The ſtamina are five filaments, ſhorter than the corolla: the antheræ are oblong; the germen is placed below the receptacle: the ſtyle is filiform, of the length of the corolla, and crooked: the ſtigma is tripartite, oblong, and revolute: the capſule is roundiſh, and contains three cells; the ſeeds are numerous, ſmall, and roundiſh.

1. *Phyteuma foliis laciniatis, floribus pyramidatis.* **Cretic Rampions.**
The laciniated-leaved Phyteuma, with pyramidated flowers.

The root is large, oblong, white and eſculent; the radical leaves are large, broad, like thoſe of ſuccory in ſhape, and laciniated at the edges: they ſtand in large cluſters, and are of a deep green above, and ſomewhat purpliſh below: the ſtalk is round, ſtriated, and thick; it grows to three or four feet high: the leaves ſtand cloſe on it, and are like the radical ones, but narrower: the flowers are moderately large, and of a beautiful purple; they ſtand on the tops of the ſtalks and branches, in thick pyramidal ſpikes.

This is a native of the eaſtern parts of the world, but we have it frequently in our gardens. C. Bauhine calls it, Rapunculus Creticus ſive Pyramidalis altera; J. Bauhine, Rapunculus Creticus petromarula; and Pontedera, Petromarula ſive lactuca petræa.

2. *Phyteuma foliis anguſtioribus, floribus glomeratis.*
The narrow-leaved, glomerated-flowered, Phyteuma.

The root of this ſpecies is very large, tuberous, and of a ſweet taſte; the radical leaves are of an oval figure, obtuſe at the point, crenated round the edges, and of a deep green colour; they ſtand on very long pedicles: the ſtalk is ſlender, ſtriated, and not more than ſix inches high: the leaves ſtand cloſely and irregularly on it; they are oblong, narrow, and crenated round the edges; at the top of the ſtalk ſtands a cluſter of five or ſix of them, and from this riſe the flowers, twenty, or more, of which are cloſe ſet together, in a kind of head: they are moderately large, and of a beautiful purpliſh-blue colour.

This is a native of ſome of the northern parts of Europe; we have it alſo in our gardens. C. Bauhine calls it, Rapunculus Alpinus corniculatus.

The other ſpecies of Phyteuma are, 1. The blue-ſpiked, comoſe Phyteuma. 2. The yellow and narrow-leaved Phyteuma. 3. The long-leaved, orbicular-ſpiked Phyteuma. 4. The graſſy-leaved Phyteuma. 5. The ſcabious-headed Phyteuma. 6. The narrow, dentated-leaved Phyteuma. 7. The narrow-leaved, many-flowered Phyteuma. 8. The long and rigid-leaved Phyteuma. 9. The tall, ſmooth, and rigid-leaved Phyteuma. 10. The roundiſh-leaved Phyteuma.

TRACHELIUM.

THE calyx is a very ſmall perianthium, divided into five ſegments, and placed on the germen: the corolla conſiſts of a ſingle petal, of the infundibuliform kind: the tube is cylindric, very long and ſlender; the limb is patulous, ſmall, and divided into five parts: the ſegments are oval and concave: the ſtamina are five capillary filaments, of the length of the corolla: the antheræ are ſimple; the germen is of a triquetrous, but roundiſh, figure, and placed below the receptacle: the ſtyle is filiform, and twice as long as the corolla; the ſtigma is globoſe; the fruit is a roundiſh, ob-

tuſely trilobous capſule, compoſed of three valves, and containing three cells. The ſeeds are numerous and very ſmall.

This genus comprehends the Trachelium of Tournefort; but the plants, commonly called Trachelia by others, are Campanulæ, already deſcribed in their places.

1. *Trachelium foliis ovatis ſerratis, caule umbella terminato.*
The oval, ſerrated-leaved Trachelium, with umbellated flowers.

The root is compoſed of a number of large fibres, thick, and full of a milky juice. The radical leaves ſtand on moderately long pedicles; they are of an oval figure, ſerrated round the edges, and of a deep green colour: the ſtalk riſes to two feet high, and ſends out a great number of branches: the leaves are oval, but ſomewhat narrower than the radical ones, ſerrated at the edges, and placed very cloſe: the flowers are moderately large, and of a fine purple, and are diſpoſed in a kind of umbels at the tops of the ſtalks.

It is a native of Italy, and is kept in ſome of our gardens. Tournefort calls it, Trachelima azureum umbelliferum; C. Bauhine, Cervicaria valerianoides cærulea.

2. *Trachelium folio longo laciniato, floribus glomeratis.*
The long, laciniated-leaved Trachelium, with glomerated flowers.

The root is compoſed of a number of large fibres, and full of a milky juice. The radical leaves are very long; they have no pedicles, and are cut in deeply at the edges: the ſtalk is round, ſtriated, and hollow; it grows to four feet high: the leaves are oblong and broad, deeply cut in at the edges, and affixed to the ſtalk by a broad baſe. At the top ſtands a cluſter of moderately large, and very long, white flowers.

It is a native of North America. Plumier calls it, Trachelium Americanum ſonchi folio, flore albo longiſſimo.

The other ſpecies are, 1. The laciniated-leaved, violet-coloured, umbelliferous Trachelium. 2. The hairy Trachelium, with cluſters of flowers from the alæ of the leaves. 3. The little cluſter-flowered Trachelium. 4. The little Trachelium, with flowers growing all along the ſtalks. This is an African.

SAMOLUS.

THE calyx is a perianthium, obtuſe at the baſe, and divided into five narrow, erect, and permanent ſegments: the corolla conſiſts of a ſingle petal; the tube is very ſhort, only of the length of the cup, and patulous: the limb is plane, and divided into five ſegments, and there are placed five connivent ſquammulæ at the baſe of the ſinus of the limb: the ſtamina are five ſhort filaments, each placed under one of the ſquammulæ of the corolla: the antheræ are connivent and covered: the germen is placed below the receptacle: the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is ſimple; the fruit is an oval capſule, ſurrounded by the cup, and containing only one cell. The ſeeds are numerous, oval, and ſmall.

Of this genus there is only one known ſpecies.

SAMOLUS.

The root is compoſed of a number of moderately thick, white fibres. The radical leaves are two inches long, and more than an inch broad: they are narrow at the baſe, and thence gradually extend in breadth, terminating in a rounded extremity; they are thick, ſmooth, of a pale green colour, and not ſerrated about the edges: the ſtalk is eight, or more, inches in height, round, of a pale green colour, and tolerably firm: the leaves ſtand alternately on it, at ſome conſiderable diſtance: they are ſhorter than the radical ones, roundiſh and affixed by the baſe, without any pedicle: the ſtalk is, toward the top, divided into ſeveral ſhort branches; the flowers are ſmall and white; they ſtand ſingly on pedicles of half an inch long each, and are not placed very near one another.

This is a native of England, and is not unfrequent in watery places. C. Bauhine calls it, Anagallis aquatica rotundifolia non crenata; J. Bauhine, Samolus Valerandi.

RONDE-

RONDELETIA.

THE calyx is a permanent perianthium, formed of a ſingle leaf, divided into five acute ſegments, and placed on the germen: the corolla conſiſts of a ſingle petal, and is of the infundibuliform kind: the tube is cylindric, and longer than the cup, and ventricoſe at the top: the limb is divided into five roundiſh ſegments, which bend backwards: the ſtamina are five ſubulated filaments, nearly of the length of the corolla: the antheræ are ſimple, the germen is roundiſh, and placed below the receptacle of the flower: the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is obtuſe. The fruit is a roundiſh, coronated capſule, containing two cells; the ſeeds are numerous and ſmall.

This genus comprehends the Rondeletia and the Chomelia of Linnæus: the characters of both are the ſame, and the words almoſt tranſcribed, ſo that it is ſurpriſing he did not ſee it. The Rondeletia is an American, deſcribed by Plumier; the Chomelia an Aſiatic, figured in the Hortus Malabaricus, v. 2.

BELLONIA.

THE calyx is a perianthium, formed of a ſingle leaf, divided into five lanceolated, acute ſegments, and permanent: the corolla conſiſts of a ſingle petal, and is of the rotated kind: the tube is very ſhort, the limb large, and divided into five ſegments. The ſtamina are five very ſhort, erect, ſubulated filaments: the antheræ are ſhort, erect, and connivent: the germen is placed below the receptacle of the flower: the ſtyle is ſubulated, ſtrait, and longer than the ſtamina: the ſtigma is acute. The fruit is a capſule of a turbinato-oval figure, ſurrounded by the cup, and has a kind of roſtrum, or beak, proceeding from it's top, formed by the connivent ſegments of the cup; it contains only one cell, in which are numerous, very ſmall, roundiſh ſeeds.

It is an American, deſcribed by Plumier; the characters are ſufficient to make it known, without a deſcription.

GENIPA.

THE calyx is a ſhort perianthium, forming a kind of undivided margin, or rim, on the top of the germen: the corolla conſiſts of a ſingle petal, of the rotated kind: the tube is very ſhort, and of a funnel-like ſhape: the limb is large, divided into five ſegments, and patent; the ſegments are of an oval figure, and acute: the ſtamina are five ſubulated, reflex filaments, ſhorter than the corolla: the antheræ are roundiſh and connivent: the germen is oval, and placed under the receptacle: the ſtyle is ſimple and ſhort; the ſtigma is of an ovato-oblong figure, large, and of the length of the ſtamina. The fruit is a fleſhy berry, of an oval figure, ſmall at each end, truncated, and contains two cells, in each of which are a number of depreſſed, angulated ſeeds.

Of this genus there is only one known ſpecies, which the characters ſufficiently diſtinguiſh, without a farther deſcription.

CINCHONA.

THE calyx is a very ſmall, permanent perianthium, formed of one leaf, divided into five ſegments at the edge. The corolla conſiſts of a ſingle petal, and is of the infundibuliform kind: the tube is cylindric and long; the limb is patulous, divided into five ſegments, ſerrated and acute. The ſtamina are five very ſmall filaments: the antheræ are oblong, and are placed within the tube of the corolla: the germen is roundiſh, and placed beneath the receptacle of the flower. The ſtyle is of the length of the corolla: the ſtigma is thick, oblong, and ſimple. The fruit is a roundiſh capſule, coronated with the cup, compoſed of two cells, and opening into two parts, longitudinally, from the baſe to the apex: the ſeeds are numerous, oblong, compreſſed, and marginated.

Of this genus there is only one known ſpecies, which is the tree whoſe bark is the famous cortex Peruvianus.

CINCHONA. The Peruvian-bark Tree.

The Cinchona is a moderately large tree. It's root is very large and ſpreading, and covered with a thick bark, greyiſh on the outſide, and yellowiſh within, which the Spaniards prefer for medicinal purpoſes before that of the other parts of the tree. The trunk grows to a foot in diameter, and is covered with a thick, rough, reddiſh-brown bark; the branches with a thinner and ſmoother; it ſends out a number of branches, and grows to about eighteen or twenty feet high. The leaves ſtand oppoſite one another, in pairs; they are of an oblong-oval figure, ſharp-pointed, and undivided at the edges; they are three inches long, two inches broad, moderately thick, and affixed to pedicles, from which a large rib extends along the middle, and ſends off a number of oblique ramifications to the ſides. The flowers ſtand in tufts, at the tops of the branches; they are ſmall, and, before they are open, much reſemble the flowers of lavender, both in ſhape and colour: the common peduncle of the whole tuft of flowers riſes from the ala of ſome leaf, and ſoon divaricates into a number of ſmaller peduncles, each of which ſuſtains on it's top a ſingle flower. The flower is of a duſky red colour on the outſide, with a whitiſh down on it, but of a very bright and beautiful red within, eſpecially toward the center, for it is ſomewhat paler about the edges. The ſtamina are yellow, the ſtyle white, the ſtigma greeniſh.

The tree is a native of South America, and is no where ſo plentiful as on the mountains about Loxa. Authors have called it, Quinquina, China-china, and Gannaperide. Linnæus has named it Cinchona, from the name of the viceroy of Peru who firſt occaſioned it's being brought into repute in Europe.

The virtues of the bark of this tree, in the cure of intermittent fevers, are ſo great, that they have thrown all the other febrifuges into neglect: it is alſo an excellent aſtringent and ſtomachic.

COFFEA.

THE calyx is a very ſmall perianthium, divided into four ſegments at the edge, and placed on the germen: the corolla conſiſts of a ſingle petal, of an infundibuliform ſhape: the tube is cylindric and ſlender, and many times longer than the cup: the limb is plane, longer than the tube, and divided into five ſegments of a lanceolated figure, with their edges bent backward. The ſtamina are five ſubulated filaments, placed on the tube of the corolla: the antheræ are incumbent, of a linear figure, and of the length of the filaments. The germen is roundiſh, the ſtyle is ſimple, and of the length of the corolla: the ſtigmata are two, reflex, ſubulated, and thick. The fruit is a roundiſh berry, with an umbilicated point: the ſeeds are two, of an elliptico-hæmiſpheric figure, gibboſe on one ſide, plane on the other, and wrapped in a membrane.

Of this genus there is only one known ſpecies, the ſeeds of which are the Coffee we uſe.

COFFEA. The Coffee Tree.

The root is compoſed of a number of long, and not very thick, ramifications. The ſtem is round, two or three inches thick, when well grown, and the tree ten, twelve, or fourteen high. It ſends out branches from near the bottom, and thence all the way to the top; theſe ſtand two together, on the oppoſite ſides of the trunk; they are, while young, very flexile, and covered with a whitiſh bark, but, as they grow older, this becomes of the ſame brown colour with that of the trunk. The leaves ſtand two at a joint; they are, in ſhape, much like the common bay-leaf, but larger, thinner, and ſofter, and of a paler green colour: they ſtand on ſhort pedicles, and are four or five inches long, and two inches wide, broadeſt in the middle, narrow at the baſe, and terminate in a very long, narrow point; and they are ſomewhat undulated; they are of a pale green colour on the upper ſide, and whitiſh underneath. The flowers ſtand in little cluſters, four or five together, in the alæ of the leaves; they have a ſhort pedicle, and are white, or a little reddiſh, moderately large, and of a ſweet ſmell. The berries are green at firſt, afterwards red, and, when full ripe, black: they are of the bigneſs of a ſmall cherry, and have within them a mucilaginous, fleſhy matter, ſurrounding the two ſeeds, which, when ſeparated from this pulp, and from their

their membranes, are what we call Coffee, and, after roaſting, drink the decoction, or infuſion, of.

The tree is a native of Arabia Fœlix and Ethiopia, and flowers all the year round. The fruit is gathered three times a year, in great abundance. Juſſieu calls it, Jaſminum Arabicum lauri folio cujus ſemen, apud nos, Coffé dicitur, but very improperly: it has not even the claſſical character of the jaſmines.

The people of the eaſtern nations are as fond of Coffee for a drink as we are, but the great people among them make it only of the membranes ſurrounding the ſeeds, not of the ſeeds themſelves, as we do. A decoction of the raw or unroaſted ſeeds is a powerful diuretic and ſudorific.

MORINDA.

THE common receptacle of the fructifications is roundiſh, and forms the flowers, which are ſeſſile, into a kind of globular cluſter. The perianthium is placed on the germen, and is divided into five ſegments, but it is ſo ſmall as to be ſcarce perceptible. The corolla conſiſts of a ſingle petal, of an infundibuliform ſhape: the tube is cylindric: the limb divided into five ſegments, acute, and erecto-patent. The ſtamina are five compreſſed filaments, ſhorter than the corolla, and inſerted under the diviſures of it: the antheræ are ſimple: the germen is ſituate under the perianthium: the ſtyle is ſimple: the ſtigma is bifid, and thick. The fruit is a berry of a ſubovate, angular figure, truncated, containing only one cell, and every-where compreſſed by the adjoining ones: the ſeed is ſingle, oſſeous, angular, and truncated.

This genus comprehends the Phyllereaſtrum of Vaillant, and the Rojoc of Plumier. It is a native of South America.

CONOCARPUS.

THE calyx is a very ſmall, erect perianthium, formed of one leaf, and divided, at the extremity, into five ſubulated ſegments; it is placed on the germen, and is permanent. There is no corolla: the ſtamina are five: the germen is large, compreſſed, obtuſe, thickeſt toward the point, and placed under the receptacle of the flower: the ſtyle is ſimple. There is no fruit, but the ſeed is naked and ſingle, and has on each ſide a prominent, membranaceous margin. A number of the germina are arranged together, in an imbricated manner, and form a ſhort and roundiſh cone; they appear like ſo many reflex ſquammæ.

This genus comprehends the Rudbeckia of Houſton.

1. *Conocarpus foliis obverſe ovatis.* The Button Tree.
The obverſely oval-leaved Conocarpus.

The root is large and ſpreading: the tree grows thirty feet high: it's trunk is often a foot in diameter. The bark is tolerably ſmooth, and of a pale grey colour. The branches are numerous and ſpreading: the leaves ſtand in pairs; they have ſhort pedicles, and are of an oval figure, but with the broadeſt part at the extremity, and ſomewhat too narrow for their length: they are an inch and a half long, and about three quarters of an inch broad, ſmooth, and of a pale yellowiſh-green: the leaves toward the extremities of the branches differ from theſe, in that they are narrower, and pointed. The extremities of the branches divide into ſeveral twigs, on which ſtand oval cluſters of flowers, which are ſmall and red: when they are fallen, the head aſſumes a more conic figure.

The tree is frequent in Jamaica, and other of the American iſlands, principally about the coaſts. Sir Hans Sloane calls it, Alni fructu laurifolia arbor maritima; Breynius, Alno affinis Americana liguſtri folio, flore rubro.

2. *Conocarpus foliis lanceolatis.*
Lanceolate-leaved Conocarpus.

The root is large and ſpreading: the tree grows to forty feet high, and it's trunk to fifteen inches in diameter. The leaves ſtand alternately, and are three inches long, of a lanceolated figure, and placed on pedicles of half an inch; they are broadeſt at

the baſe, and ſerrated round the edges. The flowers ſtand in cluſters, forming a kind of ſhort, conic heads; they are ſmall, and of a beautiful yellow colour.

This is a native of Virginia, and other parts of America. Sir Hans Sloane calls it, Alni fructu mori folio arbor, flore pentapetalo flavo.

DIERVILLA.

THE calyx is a ſmall perianthium, placed on the germen, and divided into five ſubulated, permanent ſegments. The corolla conſiſts of a ſingle petal: the tube is clavated, and gibboſe at the baſe, with a gula impreſſed beneath: the limb is divided into five ſegments, and aſſumes a kind of bilabiate figure: the upper lip is divided into two parts, the lower into three, of which the middle one is the longeſt; all the ſegments are of a lanceolated figure, and bent backward. The ſtamina are five ſubulated filaments, of the length of the corolla: the antheræ are oblong and erect. The germen is of an ovato-ſubulated figure, and is placed under the receptacle: the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is peltato-capitated, convex, and hollow underneath. The fruit is a bivalve, bilocular capſule, of an ovato-ſubulated figure, and each cell contains ſeveral ſmall, roundiſh ſeeds.

There is but one known ſpecies of this genus, and that ſo nearly allied to the loniceræ, that the generical characters only diſtinguiſh it, ſo that it needs no farther deſcription.

LONICERA.

THE calyx is a ſmall perianthium, placed on the germen, and divided into five ſegments: the corolla conſiſts of a ſingle petal: the tube is oblong, and gibboſe downwards: the limb is divided into five ſegments, one of which is more deeply ſerrated than the reſt, and all turn backward. The ſtamina are five ſubulated filaments, nearly of the length of the corolla: the antheræ are oblong: the germen is roundiſh, and placed under the receptacle: the ſtyle is filiform, and of the length of the corolla: the ſtigma is obtuſely capitated. The fruit is a roundiſh, umbilicated berry, containing two cells; the ſeeds are roundiſh, and compreſſed.

This genus comprehends the Caprifolium, Periclymenum, Chamæceraſus, Xyloſteum, Trioſteoſpermum, and Symphoricarpos of authors.

1. In the Caprifolium the lower ſegment of the corolla is twice as deeply ſeparated as the reſt, and the berry placed ſingle. 2. In the Periclymenum the ſegments of the corollæ are all nearly equally ſeparated. 3. In the Chamæceraſus the lower ſegment of the the corolla is twice as deeply ſeparated as the others, and the berries are placed two together. 4. In the Xyloſteum the ſegments of the corolla are nearly equally ſeparated, and all deeply; the berries ſtand two together. 5. In the Trioſteoſpermum the ſegments of the corolla are roundiſh, and the ſeeds three in a berry, which is coronated with a large cup: and, finally, in the Symphoricarpus, the corolla is almoſt campanulated, the fruit bilocular and ſemiquadrilocular, the ſeeds ſingle.

As the reſt of the generical characters are perfectly the ſame in all theſe, they are to be properly arranged together in the ſame genus, and theſe diſtinctions to be conſidered merely as ſpecifical.

1. *Lonicera floribus verticillatis, terminalibus, ſeſſilibus, foliis ſummis connato-perfoliatis.* **Perfoliate Honeyſuckle.**

The verticillate, ſeſſile, terminatory-flowered Lonicera, with perfoliate leaves.

The root is woody, long, and creeping: the ſtalks are round, woody, and ſlender, not able to ſupport themſelves erect; they are four, or more, feet, in length, and have, at every joint, two leaves; theſe are roundiſh, and of a bluiſh-green; the lower ones ſtand ſeparate, and on ſhort pedicles; the upper ones grow together at their baſe, and the ſtalk pierces it's way through in the middle; the top pair on every branch form a kind of hollow, from the center of which grows a cluſter of very beautiful red flowers, an inch and a half in length, without pedicles, and very ſweet to the ſmell.

It is a native of Italy and the ſouth of France, and is common with us in gardens. Tournefort calls it, Caprifolium Italicum; C. Bauhine, Caprifolium perfoliatum.

2. *Lonicera*

2. *Lonicera floribus verticillatis, foliis rotundioribus.* **Ever-green Honeyſuckle.**
The rounder-leaved, verticillate-flowered Lonicera.

The root is long, creeping, and woody: the ſtalks are very ſlender and weak; they ſeldom grow to more than four or five feet high: the leaves ſtand in pairs; they are ſmall, roundiſh, of a bluiſh-green colour, ſmooth and ſhining, on the upper ſurface, hoary underneath, often joined at the baſe. The flowers ſtand in tufts round the ſtalks; they are of a fine high crimſon colour, but of no great ſmell. The ſhrub is an ever-green, and flowers the greateſt part of the year.

It is a native of Virginia, but is not uncommon in our gardens. Tournefort calls it, Periclymenum perfoliatum Virginianum, ſemper virens et florens.

3. *Lonicera pedunculis biſloris, baccis diſtinctis, foliis integerrimis.* **Dwarf Cherry.**
The two-flowered Lonicera, with diſtinct berries and undivided leaves.

The root is long, fibrous, and creeping: the ſtem is round and firm, ſtanding erect, and growing to two or three feet high: the leaves ſtand in pairs; they are large, broad, and hairy, an inch and a half in length, and more than an inch in breadth. The flowers are ſmall and yellowiſh, oblong, and divided at the extremity; they always grow two on a pedicle, which riſes from the ala of a leaf. The berries grow like a pair of teſticles on the ſtalk, and are red, when ripe, and of a very nauſeous taſte.

It is frequent in the woods and hedges, in Germany. Tournefort calls it, Chamæceraſus dumetorum fructu gemino rubro; Dodonæus, Xyloſteum; and Linnæus, Lonicera foliis ovatis obtuſis integris.

4. *Lonicera corollæ laciniis æqualiter profunde ſectis.*
The Lonicera, with the ſegments of the flower equally deep cut in.

The root is long, woody, and creeping: the ſtalks are round, brittle, and covered with a greyiſh-brown bark, with a white pith within: they grow to three, four, or more feet high. The leaves ſtand in pairs; they are moderately large, obtuſe, hairy, eſpecially underneath, and not at all ſerrated at the edges. The flowers ſtand in cluſters, at the tops of the branches, and are large, long, and of a pale red colour, and ſweet ſmell. They ſtand two together, on long pedicles, ariſing from the alæ of the leaves: theſe are ſucceeded by two berries, large, red, when ripe, and of an unpleaſant taſte.

This is frequent about the Pyrenæan mountains, and in other places. Tournefort calls it, Xyloſteum; J. Bauhine, Chamæceraſus Geſneri, Chamæpericlymenum Alpinum quorundam.

The other ſpecies are, 1. The common Honeyſuckle of our hedges. 2. The late, German, red Lonicera. 3. The early, Italian Lonicera. 4. The ſinuated, hairy-leaved Lonicera. 5. The yellow-flowered, Italian Lonicera. 6. The black-fruited Lonicera. 7. The great-leaved, low Lonicera, called, Trioſteoſpermum; and, 8. The Symphoricarpos, or campanulated-flowered Lonicera.

MUSSÆNDA.

THE calyx is a ſmall perianthium, ſituated on the germen, and divided into five ſegments at the edge: the corolla is compoſed of a ſingle petal, and is of a funnel-like ſhape: the ſtamina are five ſlender, long filaments: the antheræ are tumid: the germen is roundiſh; the ſtyle ſhort: the ſtigmata are two. The fruit is an oblong berry, and the ſeeds in it are diſpoſed in four ſeries.

The characters are ſo peculiar, that they render a farther deſcription unneceſſary.

Claſs

Class the Fifth. Order the First.

Division the Fourth.

Pentandria Monogynia, with the stamina declinated.

MIRABILIS.

THE calyx is a permanent perianthium, formed of five leaves, of an ovato-lanceolate figure, ventricose, and erect. The corolla consists of one petal, of an infundibuliform shape, and deciduous: the tube is slender, long, and thickest above: the nectarium is placed at it's base; the limb is erecto-patent, obtusely quinquifide, and plicated; the nectarium is globose and permanent. The stamina are five filiform filaments, arising from the receptacle, and affixed, not to the nectarium, but to the petal; they are of the length of the corolla, declinated, and unequal: the antheræ are roundish, and assurgent: the germen is roundish, and placed within the nectarium: the style is filiform, of the length and situation of the stamina: the stigma is globose, punctated, and assurgent. The fruit is of an ovato-pentagonal figure, and the nectarium becomes indurated in a strange manner: the seed is single, globose, and covered.

This genus comprehends the Jalapa of Tournefort and others.

There is but one known species of it; but the vast variety of colour in the flower of this has led Tournefort and others to split that into ten or a dozen, and to describe the red-flowered, the white-flowered, the variegated-flowered, &c. as so many species.

MIRABILIS. Marvel of Peru.

The root is very large, a foot, or more, in length, and often two inches in diameter, of a dusky colour on the surface, and paler within, and, when cut transversely, shews a number of circles: it is of an acrid and very disagreeable taste. The stalk is round and smooth, half an inch, or more, in diameter, of a firm texture, and pale green colour. It grows to three feet in height, and sends out a great number of branches. The leaves are placed two at every joint; they stand on short pedicles, and are two inches, or more, in length, broadest at the base, and pointed at the extremity. The flowers rise singly from the alæ of the leaves; they are large, and naturally of a beautiful red colour, but often white, yellowish, or of a dusky purple, or, finally, of two or more of these colours, mixed in various manners in the same flower. The plant is, from the month of July to the end of October, if the season be favourable, covered with a profusion of flowers, yet none of them remain longer than twenty-four hours on it, after they are open; the greater part not half so long, but the succession of flowers seems endless. The root is naturally perennial, but decays with us in the winter, if left in the ground; if taken up, and planted again in the spring, it lasts many years.

This beautiful plant is a native of South America. Tournefort calls it, Jalapa flore rubro, flore flavo, &c. C. Bauhine, Solanum Mexicanum flore magno; others. Mirabilis Peruviana.

The root of this plant has long been known to be purgative; Tournefort and Linnæus declare that it is the jalap of the shops, but Houston, a man of great credit, brought over to us an evident convolvulus, declaring it to be the plant whose root was dug for jalap.

DATURA.

THE calyx is an oblong, tubulated, ventricose perianthium, of a pentangular figure, formed of a single leaf, divided into five segments at the extremity; it's upper part falls off so near the base, but an orbicular segment of it remains on the plant. The corolla is of the infundibuliform kind; it consists of a single petal: the tube is cylindric, and somewhat longer than the cup: the limb is erecto-patulous, of a pentangular figure, folded in five places, and almost entire at the edges, but rising into five points: the stamina are five subulated filaments, of the length of the cup:

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the antheræ are oblong, compreſſed, and obtuſe: the germen is oval: the ſtyle is filiform and ſtrait: the ſtigma is thick, obtuſe, and bilamellated. The fruit is a ſuboval capſule, formed of four valves, containing two cells, and affixed to the baſe of the cup: the receptacles are convex, large, punctated, and affixed to a partition: the ſeeds are numerous, and kidney-ſhaped.

This genus comprehends the Stramonium and the Stamonioides of authors.

1. *Datura pericarpiis ſpinoſis, erectis ovatis.* Thorn Apple.
The Datura, with ſpinoſe, erect, oval fruits.

The root is compoſed of a number of long and moderately thick fibres: the ſtalk is round, ſucculent, green, and near an inch in diameter; it ſends out a great number of branches, ſo that the plant, when full grown, is often two feet, or more, in diameter: it grows to three feet high. The leaves ſtand alternately on the ſtalks; they are very large, broad, ſerrated at the edges, and pointed at the extremity; they are of a dark green colour, ſmooth, and ſtand on pedicles of a moderate length. The flowers are very large, and always of a pure ſnow-white colour, an inch and a half over the mouth, when fully expanded; they ſtand ſingly, on ſtrait pedicles, at the divarications of the branches. The fruit is erect, of an oval figure, bigger than a walnut, covered over with long ſpines, and of a green colour.

It is a native of South America, but is very common in our gardens, and thrives ſo well in our climate, that we frequently meet with it wild, where the ſeeds have chanced to be ſcattered by any accident. Tournefort calls it, Stramonium fructu ſpinoſo, oblongo, flore albo; C. Bauhine, Solanum fœtidum pomo ſpinoſo oblongo, flore albo; Camerarius, Tatula.

2. *Datura pericarpiis globoſis ſpinoſis nutantibus.* Vetella Nut.
The Datura, with round, prickly, bending fruits.

The root is compoſed of a great number of long and thick, woody ramifications: the ſtalk is round and ſmooth, and grows to a foot and a half high: the leaves ſtand alternately on the ſtalks; they are very large, of a deep green colour, a little ſinuated at the edges, hoary, and affixed to very long pedicles, and they have a very offenſive ſmell. The flowers ſtand ſingly, at the ramifications of the branches; they are large, and ſometimes of a pure white, ſometimes reddiſh. The fruit is round, and of the ſize of a ſmall apple; it is covered with roundiſh protuberances on the ſurface, and armed with ſhort ſpines, and with ſomewhat of a hoarineſs about them: this fruit does not ſtand erect, as in the common Datura, but droops downward, and the remains of the calyx are not angulated in this, as in that ſpecies.

This is a native of Aſia and Africa; we have it in our gardens. C. Bauhine calls it, Solanum pomo ſpinoſo rotundo, longo flore; Tournefort makes two ſpecies of the varieties of it, which he calls, Stramonium fructu ſpinoſo rotundo, flore violaceo duplici triplicive, and Stramonium Ægyptiacum flore pleno intus albo, foris violaceo.

The ſeeds of this ſpecies are what are known under the name of Daturæ ſemina in ſhops.

The other ſpecies of Datura are, 1. The tall, large-fruited Datura, with ſinuated leaves, called Stramonium ferox. 2. The little, American, Alkekengi-leaved Datura. 3. The ſmooth-fruited Datura of Malabar. 4. The great Datura, with ſmall leaves.

HYOSCYAMUS.

THE calyx is a perianthium, of a cylindric figure, ventricoſe at the bottom, formed of a ſingle leaf, divided into five acute ſegments at the extremity, and permanent. The corolla conſiſts of a ſingle, infundibuliform petal: the tube is cylindric and ſhort; the limb is erecto-patent, lightly divided into five obtuſe ſegments, one of which is broader than the reſt. The ſtamina are five ſubulated and declinated filaments: the antheræ are roundiſh; the germen is roundiſh; the ſtyle is filiform, and of the length of the ſtamina, and the ſtigma capitated. The fruit is a capſule of an ovato-obtuſe figure, with a line marked on each ſide; it contains two cells, and is covered with an operculum, which falls off horizontally: the ſeeds are numerous.

1. *Hyoscyamus foliis amplexicaulibus.* **Common Henbane.**
The Hyoscyamus, with leaves surrounding the stalk.

The root is a foot long, half an inch in diameter, whitish, hard, woody, and of very little smell. The radical leaves are a foot long, and five inches broad, deeply sinuated at the edges, pointed at the extremity, sessile, of a bluish-green colour, somewhat hoary, and of an intolerably fœtid smell. The stalk is round, hard, woody, half an inch in diameter, and grows to two feet high, or more; it divides toward the top into several branches: the leaves are large, and, like those at the root, they stand alternately: the flowers are half an inch in diameter, and more in length, of a dusky browniſh colour, with a deep purple base, and a multitude of purple lines all over them. The cup is hairy, and the capsule large: the flowers are very numerous, and stand in long series, on the upper sides of the branches.

This is common with us in uncultivated Places. C. Bauhine calls it, Hyoscyamus vulgaris niger; Fuchsius, Hyoscyamus flavus.

2. *Hyoscyamus foliis ovatis integerrimis, calycibus inflatis subgloboſis.*
The oval-leaved Hyoscyamus, with inflated, subglobous cups.

The root is long, thick, and woody: the stalk is round, and rises to two feet high: the leaves are smooth, of an oval figure, undivided at the edges, and affixed to pedicles. The top of the stalk is divided into many branches, on which stand the flowers; they are moderately large, and cut into five segments. When the fruit is ripe the calyx becomes very large and inflated, and perfectly represents that of the Alkekengi; but within it is a capsule, perfectly answering to the characters of the Henbane. It is a native of Siberia, and has not been described by any body except Linnæus, who observes, that it connects in a manner the two genera of Physalis and Hyoscyamus, and is not without his doubts, but the plant itself may be a kind of mungril between both; but this bears no great face of probability.

The other species of Hyoscyamus are, 1. The common, white Henbane. 2. The lanceolated Hyoscyamus, with prickly cups. 3. The great, yellow, Cretic Hyoscyamus. 4. The little, yellow Hyoscyamus. 5. The red Syrian Hyoscyamus. 6. The white, Egyptian Hyoscyamus. 7. The little, narrow-leaved, golden-flowered Hyoscyamus. 8. The Bete-leaved Hyoscyamus.

NICOTIANA.

THE calyx is a permanent perianthium, formed of a single leaf, divided into five segments, and of an oval figure. The corolla consists of a single petal, of an infundibuliform shape; the tube is longer than the cup; the limb is patulous, lightly divided into five segments, and folded in five places. The stamina are five subulated, inclinated filaments, nearly of the length of the corolla; the antheræ are oblong: the germen is oval, the style is filiform, and of the length of the corolla; the stigma is capitated and emarginated: the fruit is a capsule of a nearly oval figure; there is a line on each side of it, and it contains two cells, and opens at the top: the receptacles are of a half oval figure, punctated and affixed to the separating body: the seeds are numerous, kidney-shaped, and rugose.

1. *Nicotiana foliis lanceolatis.* **Tobacco.**
Lanceolated-leaved Nicotiana.

The root consists of a cluster of long and thick white fibres, of a very acrid taste; the radical leaves are a foot long, or more, and five or six inches broad: the stalk is round, thick, and succulent; it grows to five or six feet high, and is hairy, and full of a white pith: the leaves stand alternately on the stalks; they are very large, often ten inches, or more, in length, hairy, without pedicles, and are thick, and terminate in a point. Their breadth is four inches, or more; they are of a yellowish-green colour, and glutinous to the touch; the top of the stalk is usually divided into three or four branches; the flowers are large, and very long, and of a beautiful pale red.

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This is a native of many parts of America, and is cultivated in many others, for the advantage of the dried tobacco and ſnuff made from it. C. Bauhine calls it, Nicotiana major latifolia; others, Tabaco latifolia, and Hyoſcyamus Peruvianus; Renealm Blennochoes.

2. *Nicotiana foliis ovatis.* English Tobacco.
The oval-leaved Nicotiana.

The root is oblong, and uſually ſingle, of the thickneſs of a man's finger, and ſix or eight inches long: the radical leaves are numerous; they are ſix inches long, about three and a half broad, and obtuſe at the extremity: the ſtalk is round, thick, and hairy; it grows to two feet high, and toward the top divides into three or four branches: the leaves ſtand alternately, at conſiderable diſtances; they are four inches long, two and a half broad, of an oval figure, affixed to ſhort pedicles, undivided at the edges, and obtuſe at the ends; of a fattiſh appearance, and duſky green colour: the flowers ſtand ſeveral together; at the top of the branches they are affixed to ſhort pedicles, and are of a yellowiſh-green colour, and much ſmaller than the flowers of the other.

This is a native of America; we call it Engliſh Tobacco, from it's being the firſt ſpecies known in our gardens. C. Bauhine calls it, Nicotiana minor; J. Bauhine, Priapeia, quibuſdam Renealmi pachyphylla.

The other ſpecies of Nicotiana are, 1. The great, narrow-leaved Nicotiana. 2. The dwarf Nicotiana. 3. The great, roundiſh-leaved Nicotiana. 4. The prickly, arboreſcent, white-flowered Nicotiana.

ATROPA.

THE calyx is a gibbous permanent perianthium, formed of a ſingle leaf, divided into five ſegments, of an ovato-acute figure: the corolla conſiſts of a ſingle, infundibuliform petal: the tube is very ſhort; the limb is ventricoſe, of an oval figure, and longer than the cup: the mouth is ſmall, and divided into five equal and expanded ſegments: the ſtamina are five ſubulated filaments, proceeding from the baſe of the petal; they are of the length of the corolla, connivent at the baſe, and bent outwardly upwards; the antheræ are thick and aſſurgent. The germen is ſemi-oval; the ſtyle is filiform, of the length of the ſtamina, and inclinated: the ſtigma is capitated, aſſurgent, and tranſverſely oblong. The fruit is a globoſe berry, placed on a large cup, and containing two cells: the receptacle is convex on each ſide, and kidney-ſhaped. The ſeeds are numerous, and kidney-ſhaped alſo.

This genus comprehends the Belladonna of Tournefort.

There is only one known ſpecies of it.

ATROPA.

The root is compoſed of a number of oblong, tuberous bodies, of a brown colour, ſucculent, and of a very diſagreeable ſmell. The radical leaves are a foot long, and five inches broad: the ſtalk riſes to three or four feet high, and is very much divaricated and branched: the leaves ſtand alternately on it, and at ſmall diſtances; they are five or ſix inches long, and more than half as much in breadth, of a duſky green above, and a paler green underneath, hairy on both ſides, and not ſinuated at the edges: the flowers are very numerous; they ſtand in the alæ of the leaves, and are large, of a campanulated figure, and ſtriated. They are of a duſky purple colour within, with a yellow, variegated baſe; the outer ſurface is of a greeniſh red, and hairy: after the flower is fallen, a fine beautiful and large berry, black, when ripe, appears in the place.

It is a native of England, but happily is not frequent. Cluſius calls it, Solanum lethale; C. Bauhine, Solanum melanoceraſos; Tournefort, Belladonna majoribus foliis et floribus. It is a powerful poiſon.

MANDRA-

MANDRAGORA.

THE calyx is a large, erect, campanulated perianthium, of a quinquangular figure, formed of one leaf, divided into five semi-lanceolated segments, venous and permanent. The corolla consists of a single petal, erect, and growing gradually wider from the base, hollow, a little larger than the cup, and divided, beyond the middle, into five lanceolated segments: the stamina are five subulated filaments, of the length of the cup, and hairy at the base: the germen is roundish; the style subulated, of the length of the stamina, and somewhat declinated: the stigma is capitated: the fruit is a great globose berry, containing two cells: the receptacle is fleshy and convex on both sides; the seeds are numerous, and kidney-shaped.

Of this genus there is only one known species, though usually, from a slight variation in the shape of the fruit, this is divided into two, a male and female.

MANDRAGORA. Mandrake.

The root is very large, two inches thick, and a foot, or more, in length; often single, but sometimes divided from about the middle into two parts, which the common people suppose like the thighs and legs of a man, and the upper part like the body; sometimes there are, however, three or four of these branches instead of two: the colour of the outer surface is a pale brown, and it is white within: the leaves are a foot, or more, in length, five inches in breadth, broadest in the middle, and have no pedicles: they are of a dusky green colour, and disagreeable smell: the flowers stand on short pedicles four inches long, slender, and rising immediately from the root; one flower stands on each. It is large, of a dusky greenish colour, with some admixture of red, and somewhat hairy: the fruit, which succeeds this, is round, and of the size of a small apple, green at first, but yellow and soft, when ripe. Sometimes it is not perfectly round, but of a turbinated or pear-like form, in which case the plant is called the female Mandrake, as in the other, or more common state, it is called the male. The whole plant has a very bad smell.

It is a native of Spain and Italy, and is frequent in gardens with us. C. Bauhine calls it, Mandragora mas fructu rotundo, and Mandragora flore purpurascente. It has been esteemed a poison by many, and by others it is declared innocent. The bark of the root was once in use as a narcotic; at present the leaves are used in ointments.

VERBASCUM.

THE calyx is a small permanent perianthium, formed of one leaf, divided into five erect, acute segments at the rim: the corolla consists of a single petal, of a rotated figure; the tube is cylindric, and very short; the limb is patent, and divided into five oval, obtuse segments: the stamina are five subulated filaments, shorter than the flower: the antheræ are roundish, compressed, and erect: the germen is roundish; the style is filiform, of the length of the stamina, and inclinated; the stigma is thick and obtuse: the fruit is a roundish capsule, divided into two cells: the receptacles are of a semi-oval figure, and affixed to the partition: the seeds are numerous and angular. In most species, the stamina are inclinated, unequal, and covered with coloured villi at the base.

This genus comprehends the Verbascum and Blattaria of authors.

1. *Verbascum foliis utrinque tomentosis, caule floribus sessilibus clavato.* White Mullein.

The Verbascum, with leaves woolly on each side, and with sessile flowers.

The root is oblong, single, woody, moderately thick, and covered with fibres; the radical leaves are fourteen inches long, and six in breadth; they are woolly, and pointed at the extremity: the stalk is thick, firm, and rigid, and grows to six or eight feet high: the leaves stand very close, in an irregular manner on it; they have no pedicles, but have membranaceous appendages often running a great way from their bases, and giving

giving the ſtalk an alated figure. They are four or five inches long, and two or three broad, very white and woolly, and pointed at the extremity: the ſtalk terminates in a kind of ſpike of a foot and half, or more, in length, compoſed of multitudes of flowers, very thick ſet together, and opening ſucceſſively and irregularly: they are moderately large, of a beautiful yellow, and the antheræ in them of a bright purple.

The plant is common with us in dry places. C. Bauhine calls it, Verbaſcum mas latifolium luteum; others, Tapſus barbatus.

2. *Verbaſcum foliis ovatis crenatis ſubtus tomentoſis, caule angulato.* **Black Mullein.**

The oval, crenated-leaved Verbaſcum, with angular ſtalks.

The root is oblong, ſingle, and furniſhed with a number of ſmall and ſlender fibres. The radical leaves are ten inches long, and four, or more, broad, crenated round the edges, and pointed at the ends. The ſtalk is angular, and grows to five or ſix feet in height: the leaves ſtand irregularly on it, but at ſome diſtance from one another; they have pedicles of two inches long, and uſually of a reddiſh colour, and are of an oval form, four or five inches long, crenated round the edges, of a duſky green at top, and hoary or woolly underneath. The top of the ſtalk furniſhes a long ſpike of flowers, thick ſet together, and opening irregularly; they are large, of a beautiful bright yellow, with purple antheræ.

It is common by road-ſides, in many parts of England. C. Bauhine calls it, Verbaſcum nigrum flore ex luteo purpuraſcente; Dodonæus, Verbaſcum nigrum; Lobel, Verbaſcum ſalviæ folio.

3. *Verbaſcum foliis amplexicaulibus oblongis glabris, pedunculis ſolitariis.* **Yellow Moth Mullein.**

The oblong, ſmooth-leaved Verbaſcum, with ſingle peduncles.

The root is oblong, thick, and furniſhed with a multitude of fibres. The radical leaves are three inches long, an inch broad, crenated at the edges, and of a dark green colour: the ſtalk is round; it riſes to two or three feet high; the leaves ſtand irregularly, and pretty cloſe on it: they ſurround the ſtalk at the baſe, and are two or three inches long, an inch broad, jagged at their edges, and of a duſky green colour, ſmooth and ſhining; the top of the ſtalk furniſhes a long ſpike of flowers, but they are not placed ſo cloſe as in the former ſpecies, but each ſtands out on it's own ſeparate pedicle. They are very large, and of an extreamly beautiful yellow colour: the ſtamina in the midſt are of a deep ſtrong purple, and add greatly to the beauty of the flower.

It is a native of England, but is not common with us. C. Bauhine calls it, Blattaria lutea folio oblongo laciniato; J. Bauhine, Blattaria lutea. The flowers are often white.

The other ſpecies of Verbaſcum are, 1. The great, ſweet-ſcented, white Verbaſcum. 2. The thick-leaved, branched, gold yellow-flowered Verbaſcum. 3. The undulated-leaved Verbaſcum. 4. The duſty Verbaſcum, with a ſmall, yellow flower. 5. The tall, white-flowered Verbaſcum. 6. The branched, ſmall-flowered, ſmooth-leaved Verbaſcum. 7. The borrage-leaved Verbaſcum. 8. The purple-flowered Verbaſcum. 9. The tall, jagged-leaved Verbaſcum, with great, yellow flowers. 10. The multifid-leaved, hoary Verbaſcum. 11. The conjugate-leaved, Cretic Verbaſcum. 12. The ſhrubby, ſpinoſe Verbaſcum. 13. The white, ſinuated-leaved Verbaſcum. 14. The Conyza-leaved Verbaſcum, with ferrugineous, yellow flowers. 15. The betony-leaved Verbaſcum. 16. The long, narrow-leaved Verbaſcum. 17. The roundiſh, white-leaved Verbaſcum.

CORIS.

THE calyx is a permanent, campanulated perianthium, formed of one leaf, divided into ten ſegments at the edge, the alternate ones reflex. The corolla conſiſts of a ſingle petal, and is of the ringent kind: the tube is cylindric, and of the length of the cup; the limb is plane, and divided into five oblong, obtuſe, emarginated ſegments; the two upper ones ſhort, and more diſtant from one another: the ſtamina are five ſetaceous filaments, of the length of the corolla, and declinated: the antheræ are ſimple; the germen is roundiſh; the ſtyle is filiform, of the length of the ſtamina, and declinated: the ſtigma is thick; the fruit is a globoſe capſule, formed of five valves, and ſituated in the bottom of the cup: the ſeeds are ſmall, numerous, and oval.

Of this genus there is only one known ſpecies.

CORIS.

The root is oblong, thick, and reddiſh on the outſide: the ſtalks are round, ſmooth, and firm, uſually of a purpliſh colour, and grow to three or four inches high; they are very much branched. The leaves are like thoſe of the larger erica, but ſomewhat ſmall, oblong, and ſet extreamly thick, and cloſe together: the flowers ſtand in cluſters, at the extremities of the branches, forming a kind of ſhort ſpikes or heads: they are ſmall, but of an extreamly beautiful purple, or bluiſh, colour.

It is a native of France and Italy; we have it in ſome of our gardens. C. Bauhine calls it, Coris cærulea maritima; Lobel, Coris Monſpeliaca.

Claſs the Fifth. Order the Firſt.

Diviſion the Fifth.

Pentandria Monogynia, with monopetalous flowers and berries placed upon the receptacle.

RHAMNUS.

THERE is no calyx. The corolla has been, indeed, by ſome taken for a calyx; but the ſituation of the ſtamina proves, that it is not ſo: the corolla conſiſts of a ſingle, unperforated petal: the tube is of a turbinated, cylindric figure: the limb patent, divided, and acute; the whole petal is extreamly rude, but internally coloured, and of an infundibuliform ſhape, and at the baſe of every ſegment it has a little ſquammula, which is connivent inwardly. The ſtamina are ſubulated, and are in number equal to the ſegments of the corolla, and are inſerted into the corolla under theſe ſquammulæ; the antheræ are ſmall: the germen is roundiſh; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is obtuſe, and divided into ſegments, fewer in number than the ſtamina: the fruit is a round, naked berry, divided within into fewer cells than there are ſegments of the corolla: the ſeeds are ſingle, roundiſh, gibbous, and compreſſed on one ſide.

This genus comprehends the Rhamnus, Frangula, Cerviſpina, Paliurus, Alaternus, and Zizyphus of authors. The ſtructure of the flower is evidently the ſame in all theſe. The other differences are to be looked on only as ſpecific. In the Frangula, the ſtigma is emarginated; the fruit contains two ſeeds, and the corolla has five ſegments. In the Cerviſpina, the ſtigma is quadrifid; the fruit contains four ſeeds, and the corolla has four ſegments; in this genus the male and female flowers are on different individuals of the ſame ſpecies. In the Paliurus there are three ſtyles; the nucleus has three cells, the corolla has five ſegments, and the berry is ſurrounded by a membranaceous rim. In the Alaternus, the ſtigma is trifid; the fruit has three ſeeds, the corolla five ſegments. In this the ſquammulæ of the corolla are wanting, and there are male and hermaphrodite flowers on ſeparate plants. In the Zizyphus, there are two ſtyles, and the nucleus contains two cells; the corolla has five ſegments.

1. *Rhamnus*

1. *Rhamnus ramis ſpina terminatis, floribus quadrifidis diœcis.*
The Rhamnus, with terminatory ſpikes, and quadrifid, diœcious flowers. **Buckthorn.**

The root is woody, large, and ſpreading; the ſhrub grows to ten or fifteen feet high: the trunk is covered with a blackiſh, external bark, under which there are a yellow and a green one: the wood is hard and whitiſh. It is very ramoſe, and every branch is full of leſſer ſhoots, beſet with leaves, and terminated each by a very robuſt and ſharp thorn. The leaves are an inch and half long, and more than an inch broad, ſerrated at the edges, and terminating in a point: the flowers are very ſmall and green: the berries of the ſize of a pea, round, black, and containing four ſeeds; they ſtand on long pedicles, about the baſes of the ſpines. The ſeveral ſhrubs of this ſpecies are ſome of them only productive of male flowers, ſucceeded by no fruit; others produce hermaphrodite flowers, ſucceeded by berries.

It is common in our hedges. C. Bauhine calls it, Rhamnus catharticus; others, Spina cervina, and Cerviſpina. The juice of it's berries makes the Syrupus de ſpina cervina, or Syrup of Buckthorn of the ſhops, in ſuch common uſe as a purge.

2. *Rhamnus inermis floribus monogynis hermaphroditis*
The Rhamnus without prickles, with hermaphrodite flowers, and with ſingle ſtyles. **Black Alder.**

The root is woody, creeping, and full of fibres. The ſhrub riſes to about ſix or eight feet high; the ſtem is ſeldom more than half an inch in diameter, and divides into a number of branches, ſo that the ſhrub is not of the robuſt kind: the bark of the trunk is ſmooth and brown, uſually ſpotted with bluiſh; the under bark yellow, and ſtains any thing it touches; the wood is very brittle and whitiſh, with a pith within: the leaves ſtand irregularly on the branches; they are large, roundiſh, and terminate in a point; they are near two inches long, and little leſs in breadth, of a dark green colour, and ſhining ſurface. The flowers are ſmall, and of a whitiſh green colour; they grow in cluſters from the alæ of the leaves, each on it's ſeparate pedicle: the berries are round, green at firſt, afterwards red, and finally black, and contain two ſeeds.

It is common in ſome of our woods. Tournefort calls it, Frangula; C. Bauhine, Alnus nigra baccifera.

3. *Rhamnus aculeis geminis, altero inferiore reflexo, floribus trigynis.*
The Rhamnus, with two thorns at a place, the lower one crooked, and with three ſtyles. **Chriſt's Thorn.**

The root is woody and ſpreading; the ſhrub is uſually about ſix or eight feet high, but it ſometimes grows to the ſtature of a tree: the trunk is thick; the branches numerous, reddiſh, weak, and bent downwards: the ſpines are frequent, ſhort, and ſharp; the leaves are ſmall, of an oval figure, lightly crenated about the edges, and of a pale green: the flowers ſtand in the alæ of the leaves, and are ſmall and yellowiſh; the fruit is edged on each ſide with a membrane.

It is a native of France, and other parts of Europe. Dodonæus calls it, Paliurus; Camerarius, Rhamnus; C. Bauhine, Rhamnus folio ſubrotundo fructu compreſſo; others, Rhamnus tertius Dioſcoridis.

4. *Rhamnus inermis floribus diœcis, ſtigmate triplici.*
The Rhamnus without prickles, with diœcious flowers, and a tryple ſtigma. **Alaternus.**

The root is woody and creeping; the ſhrub riſes to ſix or eight feet high, ſometimes much more: the trunk is covered with a greyiſh bark, under which is a yellow one: the branches are numerous; the leaves are of an oval figure, an inch long, and of

of a gloſſy ſurface, thick, firm, and placed near one another; they are lightly dentated at the edges. The flowers are ſmall, and of a greeniſh colour; they hang in cluſters from the alæ of the leaves, and each has it's ſeparate pedicle. The fruit is a round berry, red, when ripe. In this ſpecies ſome ſhrubs bear only male flowers, others hermaphrodite ones and berries.

It is a native of France, Italy, and Germany; we have it frequently in our gardens. Cluſius calls it Alaternus; C. Bauhine, Philyrea elatior et humilior.

5. *Rhamnus floribus digynis, foliis ovatis.* The Jujube Tree.
The oval-leaved Rhamnus, with digynous flowers.

The root is woody and large. The ſhrub grows often to twelve feet high, ſometimes it has the appearance of a regular and moderately large tree. It's trunk is covered with a browniſh bark; it's wood is white and firm; the branches are numerous, and beſet with thorns. The leaves ſtand alternately, and are of an oval figure, an inch and a half long, and an inch broad, obtuſe, ſerrated at the edges, and of a pale green. The flowers ſtand in cluſters, at the alæ of the leaves; they are ſmall and greeniſh. The fruit is of the bigneſs of a ſmall olive, and reddiſh, when ripe.

It is a native of Spain and Italy; we have it ſometimes in gardens. Authors call it, Zizyphus and Jujuba. The fruit was at one time uſed in medicine as a pectoral, and ſometimes in fevers; at preſent it is not regarded.

CHRYSOPHYLLUM.

THE calyx is a ſmall, permanent perianthium, formed of five roundiſh leaves: the corolla is formed of a ſingle, campanulated petal: the limb is divided into ten ſegments, which are alternately roundiſh and patulous, and narrow and erect: the ſtamina are five ſubulated filaments: the antheræ are ſimple: the germen is roundiſh: the ſtyle is ſubulated: the ſtigma is ſimple. The fruit is a large berry, of an oval figure, and containing one cell: the ſeeds are oſſeous, and three in number.

This genus comprehends the Cainito of Plumier, and is of kin to the rhamnus and ſideroxylum; the characters expreſs the eſſential difference from them, and render a deſcription unneceſſary.

SIDEROXYLUM.

THE calyx is a ſmall, erect perianthium, compoſed of a ſingle leaf, divided into five ſegments, and permanent. The corolla conſiſts of a ſingle petal, divided into five roundiſh, erect, concave ſegments; and, at the baſe of every one of theſe, there is placed a cuſpidated, ſerrated denticle, bending inwards. The ſtamina are five ſubulated filaments, of the length of the corolla: the antheræ are ſimple: the germen is roundiſh; the ſtyle is ſubulated, and of the length of the ſtamina: the ſtigma is ſimple. The fruit is a roundiſh berry, containing only one cell: the ſeeds are four in number.

LYCIUM.

THE calyx is a ſmall, erect, obtuſe, permanent perianthium, divided into five ſegments: the corolla conſiſts of a ſingle, infundibuliform petal: the tube is cylindric, patent, and crooked: the limb is ſmall, divided into five ſegments, obtuſe and patulous: the ſtamina are five ſubulated filaments, growing out of the tube of the corolla; they are ſhorter than it, and inclinated: the antheræ are erect: the germen is roundiſh: the ſtyle is ſimple, and longer than the ſtamina: the ſtigma is bifid and thick. The fruit is a roundiſh berry, containing two cells: the ſeeds are numerous, and kidney-ſhaped: the receptacles are convex, and affixed to the diſſipimentum.

This genus comprehends the Lycium and Jaſminoides.

1. *Lycium*

to

1. *Lycium foliis ovatis dentatis.* **Avignon Thorn.**
The Lycium, with oval, dentated leaves.

The root is formed of a number of woody ramifications. The ſhrub riſes to ſix, or more, feet in height, and is very much branched, and armed with long and robuſt thorns. The leaves ſtand irregularly on the branches; they are about an inch long, near as much in breadth, and dentated at the edges. The flowers ſtand in cluſters, about the baſe of the ſpines; they are ſmall, and of a pale yellowiſh-green colour: the pedicles they ſtand on are ſhort: the berries are ſmall and roundiſh.

It is a native of France, Germany, and ſome other parts of Europe. C. Bauhine calls it, Lycium Gallicum; Lobel, Paliurus alia peregrina.

2. *Lycium foliis linearibus.* **Purple Jaſminoides.**
The narrow-leaved Lycium.

The root is large and ſpreading. The ſhrub grows to eight or ten feet high. The trunk is large; the branches numerous and tortuous; they ſend off many ſhort ſhoots, each of which, like the main branch, is terminated by a robuſt ſpine. The leaves are an inch long, very narrow, obtuſe at the end, and even at the edges. The flowers ſtand ſingly, on moderately long pedicles; they are long, large, and of a beautiful purple colour. The fruit is of the ſize of a large nut.

It is a native of Africa; we have it in ſome gardens. C. Bauhine calls it, Rhamnus alter foliis ſalſis, flore purpureo; Niſſole and Micheli, Jaſminoides Africanum jaſmini aculeati foliis et facie.

The other ſpecies of Lycium are, 1. The long-leaved Lycium. 2. The box-leaved Lycium. 3. The olive-leaved Lycium. 4. The capillaceous-leaved Lycium. 5. The broader-leaved, Jaſminoide Lycium. 6. The willow-leaved Lycium, called prickly Jaſmine.

CESTRUM.

THE calyx is a ſmall, cylindric, obtuſe perianthium, formed of a ſingle leaf, divided into five ſegments at the rim, erect, and obſcure. The corolla conſiſts of a ſingle, infundibuliform petal: the tube is cylindric, very long and ſlender; the opening is roundiſh: the limb plane, plicated, and formed into five equal, oval ſegments. The ſtamina are five filiform filaments, adhering longitudinally to the tube, though ſending out in the middle a little denticle, which ſtands inward. The antheræ are roundiſh, but ſomewhat tetragonal, and ſtand within the opening of the petal. The germen is of a cylindric, but ſomewhat oval, figure, of the length of the cup. The ſtyle is filiform, and of the length of the ſtamina: the ſtigma is thick, obtuſe, and ſlightly emarginated. The fruit is an oval, oblong berry, containing only one cell: the ſeeds are numerous and roundiſh.

This genus comprehends the Hidinna of Fevill. The characters diſtinguiſh it ſufficiently.

PHILYEA.

THE calyx is double; there is a common receptacle of the flowers, which collects them all into a head, or diſk, and, beſide this, each has it's proper perianthium, which is formed of three narrow, oblong leaves, and is permanent. The corolla conſiſts of a ſingle, imperforated petal, externally rude and erect: the tube is conic, and of the length of the perianthium: the limb is divided into five ſmall, erect ſegments, and, at the baſe of each of theſe, there is a little, acuminated ſquammula, turning inwards. The ſtamina are five very ſmall filaments, inſerted into the corolla under theſe ſquammulæ. The antheræ are ſimple: the germen is ſituate in the bottom of the flower: the ſtyle is ſimple: the ſtigma is obtuſe: the fruit is a roundiſh, trilobous capſule, formed of three valves, and divided into three cells: the ſeeds are ſingle, roundiſh, gibbous on one ſide, and acuminated.

This genus comprehends the Alaternoides of authors. The characters diſtinguiſh it ſufficiently.

CHIRONIA.

THE calyx is an erect, permanent perianthium, divided at the edge into five lanceolated ſegments. The corolla is formed of a ſingle petal, and is equal: the tube is roundiſh, and of the ſize of the cup: the limb is divided into five equal, oval, ſegments, and patent: the ſtamina are five broad and ſhort filaments, produced from the mouth of the tube: the antheræ are large, oblong, erect, and connivent: the germen is oval: the ſtyle is filiform, a little longer than the ſtamina, and declinated: the ſtigma is capitated and aſſurgent. The fruit is of an oval figure, and contains two cells: the ſeeds are numerous and ſmall. The characters diſtinguiſh it ſufficiently.

BRUNFELSIA.

THE calyx is a very ſmall, campanulated, obtuſe perianthium, formed of one leaf, divided into five ſegments at the edge, and permanent. The corolla conſiſts of a ſingle, infundibuliform petal: the tube is very long; the limb plane, divided into five ſegments, and obtuſe: the ſtamina are five, of the length of the tube, and inſerted into it: the antheræ are oblong: the germen is roundiſh and ſmall: the ſtyle is capillary, and of the length of the tube: the ſtigma is thick. The fruit is a globoſe berry, containing only one cell: the ſeeds are numerous, roundiſh, and placed cloſe to the integument of the berry.

It is an American, deſcribed by Plumier.

MYRSINE.

THE calyx is a ſmall, permanent perianthium, formed of one leaf, divided into five, ſometimes four, oval ſegments. The corolla is formed of a ſingle petal, divided into five ſemioval, obtuſe, connivent ſegments: the ſtamina are five filaments, ſcarce diſcernible, inſerted into the middle of the corolla: the antheræ are ſubulated, erect, and ſhorter than the corolla: the germen is of a globoſe figure, and almoſt fills up the corolla: the ſtyle is cylindric, longer than the corolla, and permanent: the ſtigma is large, woolly, and hangs out of the corolla. The fruit is a roundiſh, depreſſed berry, containing five cells, and in each a ſingle ſeed: ſometimes the ſegments of the cup are but four, then the ſtamina, &c. are four alſo.

STRYCHNUS.

THE calyx is a ſmall, deciduous perianthium, formed of one leaf, divided into five ſegments. The corolla is formed of a ſingle petal: the tube is cylindric: the limb is patent, divided into five ſegments, and acute: the ſtamina are five filaments, of the length of the corolla: the antheræ are ſimple: the germen is roundiſh: the ſtyle is ſimple, and longer than the ſtamina: the ſtigma is thick. The fruit is a very large, ſmooth, fragile berry, of a globoſe figure, containing only one cell, and full of a pulpy matter: the ſeeds are orbiculate, depreſſed, hairy, the hairs radiated from the edges.

CAPSICUM.

THE calyx is an erect, permanent perianthium, formed of one leaf, divided into five ſegments at the edge. The corolla is a rotated petal: the tube is very ſhort: the limb is large, patent, and plicated, lightly divided into five broad, acute ſegments: the ſtamina are five very ſmall, ſubulated filaments: the antheræ are oblong and connivent: the germen is oval: the ſtyle is filiform, and longer than the ſtamina: the ſtigma is obtuſe. The fruit is a berry, without any pulp, of a figure approaching to oval, hollow, coloured, formed into two cells: the receptacles are dry, and grow to the diſſipimentum: the ſeeds are numerous, kidney-ſhaped, and compreſſed.

Of this genus there is but one known ſpecies. Tournefort gives an account, indeed, of no leſs than twenty-ſix different ones; and moſt other authors name ten or a dozen; but, ſtrictly examined, they will be found to be all one and the ſame plant, varying, as it does almoſt infinitely, in the length and figure of it's fruit.

CAPSICUM. Guinea Pepper.

The root is oblong, ſlender, and furniſhed with a number of fibres. The ſtalk is angulated, hairy, firm, and ſolid, of a ſtrong green colour, except at the origin of the leaves, where is it uſually reddiſh; it is much branched, and with us grows to a foot and a half, or two feet, in height; in hotter countries to four feet. The leaves ſtand ſingly; they are oblong, broadeſt in the middle, and pointed at the extremity, three inches long, and an inch and a quarter broad, ſmooth, thick, and of a yellowiſh-green colour. The flowers ariſe from the alæ of the leaves, and from the divarications of the branches; they are moderately large and white, and ſtand on long pedicles; in their place comes the fruit, the character of which is, that it is a berry without juice; it's ſhape and ſize vary extreamly; it's colour is uſually a fine bright red, but this not always: in ſhape it is ſometimes long, and ſometimes ſhort and roundiſh, ſometimes oval, ſometimes cylindric, and ſometimes broad and flatted; ſometimes cordated, ſometimes ſharp-pointed, ſometimes obtuſe: it is ſometimes no larger than a cherry, ſometimes as big as a pear, ſometimes five inches long: it is upon theſe variations that Tournefort and others have formed their diſtinctions of imaginary ſpecies; the whole habit of the plant is otherwiſe the ſame in all, and, as to theſe differences, a ſkilful gardener can multiply them to infinity. Tournefort calls it Capſicum; C. Bauhine, Piper Indicum.

It is a native of Braſil, Mexico, and many other parts of America, and even of ſome of the northern parts of that quarter, as alſo of the Eaſt Indies. The whole plant is of a burning, acrid taſte. The people of the American plantations uſe the fruit in ſauces, under the name of Cayan Pepper, or, as ſome of them ſpeak it, Cayan Butter.

SOLANUM.

THE calyx is a permanent perianthium, formed of one leaf, divided into five ſegments at the edge, erect and acute: the corolla conſiſts of a ſingle, rotated petal: the tube is very ſhort; the limb large, plicated, divided into five ſegments, and reflexo-plane: the ſtamina are five very ſmall, ſubulated filaments: the antheræ are oblong, connivent, and contingent: the germen is roundiſh: the ſtyle is filiform, and longer than the ſtamina; the ſtigma is obtuſe. The fruit is a round, ſmooth berry, punctated at the top, and formed into two cells: the receptacle is fleſhy, and convex on both ſides: the ſeeds are numerous and roundiſh.

This genus comprehends the Solanum, Melongena, and Lycoperſicon of authors.

1. *Solanum caule inermi herbaceo, foliis ovatis angulatis.* Common Nightſhade.

The herbaceous Solanum, without prickles, with oval, angular leaves.

The root is oblong, ſlender, and ſurrounded with a multitude of fibres. The ſtalk is roundiſh, thick, tortuous, and branched. It grows to a foot and a half high, and is of a dark green colour. The leaves ſtand ſingle, and on long pedicles; they are of a roundiſh, oval figure, largeſt at the baſe, ſinuated round the edges, and they terminate in a point. The flowers ſtand on long pedicles, affixed ſeveral together to one common peduncle, ariſing from the alæ of a leaf; they are ſmall and white; the berry that ſucceeds each is as big as a pea, black and gloſſy.

It is very common in our fields and gardens. C. Bauhine calls it, Solanum officinarum; Tournefort, Solanum acinis nigricantibus.

2. *Solanum caule inermi perenni flexuoſo, foliis ſuperioribus haſtatis.* Woody Nightſhade.

The perennial, flexuous-ſtalked Solanum, with the upper leaves haſtated.

The root is compoſed of a multitude of fibres; the ſtalks are round, woody, but very ſlender, weak, and flexuous; they ſupport themſelves uſually among buſhes, and will

will grow to ſix or eight feet in length. The bark of the main ſtalk is of a greyiſh-brown, that of the young ſhoots green. The leaves ſtand ſingly on large pedicles; they are of a kind of oval figure, but too much pointed at the end, and have two long auriculæ at the baſe. The flowers grow in cluſters; they are ſmall, and of an ill ſmell, but of a very beautiful purple colour; the berries, which ſucceed them, are oblong and red.

It is frequent with us in watery places, and among hedges. C. Bauhine calls it, Solanum ſcandens ſive Dulcamara.

3. *Solanum caule inermi herbaceo, foliis pinnatis inciſis.* Love Apple.

The herbaceous Solanum, without prickles, with pinnated, ſerrated leaves.

The root is compoſed of a multitude of white fibres: the ſtalk is roundiſh, hollow, hairy, weak, and procumbent in great part: it grows to three or four feet long, and uſually keeps the upper half erect, the reſt on the ground; it is very ramoſe, and the branches long. The leaves are pinnated; each conſiſts of three or four pair of pinnæ, which are of an oval figure, ſerrated round the edges, and an inch long, affixed to a middle rib, terminated with an odd leaf at the end: they are ſomewhat hairy, and of a deep duſky green colour. The flowers do not grow from the alæ of the leaves, but from the intermediate ſpace; they ſtand ten or twelve together, each on a pedicle of an inch long; they are moderately large, and yellow. The fruit is very large and beautiful, of a yellowiſh-red colour.

It is a native of both the Eaſt Indies and America, and is very common in our gardens. The fruit is eaten by many people, but it ought to be thoroughly ripe. C. Bauhine calls it, Solanum pomiferum fructu rotundo ſtriato molli; Tournefort, Lycoperſicon Galeni.

4. *Solanum calycibus aculeatis, foliis ovatis integerrimis tomentoſis.* Mad Apple.

The prickly-cupped Solanum, with oval, woolly leaves.

The root is compoſed of a multitude of fibres, and does not deſcend very deep into the ground: the ſtalk is uſually ſingle, round, reddiſh, and covered with a ſoft down, which is eaſily rubbed off; it is of the thickneſs of a finger, not more than eight or ten inches high, but branched from the very bottom to the top. The leaves are very large, often four inches and a half long, and more than three broad; they are deeply ſinuated about the edges, and they ſtand on very long and thick pedicles; the colour of the leaf is a dark green; but the whole ſtalk of the plant, the pedicles of the leaves, and even the middle rib, is uſually of a blood red; there is always a looſe down upon the leaves, and the middle rib is ſometimes armed with thorns. The flowers grow oppoſite to the leaves, uſually ſingle, ſometimes two or three together; the cup is armed with red ſpines: the flower itſelf is large, naturally of a purple colour, ſometimes whitiſh. The fruit is roundiſh, oval, or of an oblong figure, approaching to that of a cucumber, of a fine purple, or greeniſh, colour.

It is a native of Africa, and of ſome parts of America, but we have it in our gardens. Tournefort calls it, Melongena fructu rotundo; C. Bauhine, Solanum pomiferum fructu oblongo; Dodonæus and others, Mala inſana; but, notwithſtanding that terrible name, the Italians eat the fruit, as they do that of the former ſpecies, without any injury.

The other ſpecies of Solanum are very numerous in nature, but not nearly ſo many as they appear in the writings of the botanical authors, who have frequently made ſix or eight ſpecies out of one: an inſtance of this we have in the firſt ſpecies of Solanum deſcribed here, the moſt common of all the kinds, both here and in many other places, and almoſt univerſal throughout the world, but with ſome variation, as, 1. In the Eaſt Indies; it's leaves are even at the edges, and ſmooth, and the ſtalks round. 2. In Guinea the ſtalks are angular, and the leaves ſmooth. 3. In Virginia the ſtalks are angular and dentated, the leaves ſmooth, and bent back. 4. In our own country the ſtalks are round and hairy, and the leaves ſinuated, and very little hairy. 5. In Judæa the ſtalk is ſomewhat prickly, and the berries ſometimes yellow. Theſe are but very trifling variations, when we conſider the plant in ſo many different climates; yet every one of theſe varieties has been deſcribed, by one author or other, under the name of a

diſtinct

distinct species, and thus six species made out of what is truly but one. Dillenius has called the Indian kind, Solanum procerius patulum vulgaris fructu; Boerhaave calls the Guinea kind, Solanum fructu nigro umbellato; and so of the rest. This may explain the reason why, in many genera, the species mentioned here are much fewer than stand usually in authors.

The more singular and distinct kinds, beside the above described, are, 1. The common Potato. 2. The borrage-leaved, prickly Solanum. 3. The cordated-leaved, prickly Solanum. 4. The shrubby, narrow-leaved Solanum. 5. The prickly, procumbent Solanum. 6. The yellow-spined, American Solanum. 7. The great, woolly, prickly Solanum. 8. The sinuated-leaved Solanum, with purple spines. 9. The pomiferous, soft, woolly Solanum, with no spines. 10. The long-fruited, sinuose-leaved Solanum. 11. The bay-leaved, prickly Solanum. 12. The mullein-leaved Solanum. 13. The almond-leaved Solanum. 14. The henbane-leaved, climbing, prickly Solanum. 15. The blite-leaved, shrubby Solanum. 16. The angulated-leaved, great-fruited, shrubby Solanum. 17. The prickly, long-fruited Solanum.

PHYSALIS.

THE calyx is a small, pentagonal, ventricose perianthium, formed of a single leaf, divided into five short acuminated segments at the edge, and permanent. The corolla consists of a single, rotated petal: the tube is very short: the limb is large, plicated, divided into five short, acute segments: the stamina are five very small, subulated filaments: the antheræ are erect and connivent: the germen is roundish: the style is filiform, somewhat longer than the stamina: the stigma is obtuse. The fruit is a small berry, roundish, and containing two cells; it is situated in the bottom of a large, hollow, coloured, and inflated case, which is formed of the perianthium, extended to those dimensions, and closed at the extremity: the receptacle is kidney-shaped, and duplicate: the seeds are numerous, kidney-shaped, and compressed.

1. *Physalis caule simplici annuo, foliis integerrimis geminatis, floribus solitariis.* **Winter Cherry.**

The single, annual-stalked Physalis, with geminated leaves, and single flowers.

The root is long and slender; it creeps under the surface, and sends out a number of fibres. The stalk is round, slender, somewhat hairy, often red, and always jointed at small distances; at every joint there stand two leaves; each has it's own long pedicle; they are of an oval figure, obtuse at the end, and of a yellowish-green colour, not serrated at the edges, a little hairy, scarce perceptibly so, and of a pale yellowish-green colour. The flowers stand on slender, hairy pedicles, of three quarters of an inch long, growing from the alæ of the leaves; they are large and white; when they are fallen, the cup swells to the bigness of a walnut, and becomes red, pentagonal, and hollow, like a bladder; the berry is placed at it's bottom, and is red, and of the bigness of a small cherry.

It is a native of Germany, Italy, and France; we have it in gardens. Tournefort calls it, Alkekengi officinarum; C. Bauhine, Solanum vesicarium.

2. *Physalis annua ramosissima, ramis teretibus pubescentibus, geniculis nodosis.* **Virginian Winter Cherry.**

The branched Physalis, with round, hoary stalks, and knotty joints.

The root is fibrous: the stalk is round, hairy, jointed, and protuberant at the joints, a foot and a half long, but in great part procumbent. The leaves are oval, hoary, and oblong; the flowers are smaller than in the former, and the fruit is yellow.

It is a native of Virginia. Morison calls it, Solanum vesicarium procumbens Virginianum folio lanuginoso.

The other species are, 1. The Indian, beet-leaved Physalis. 2. The small-fruited Physalis. 3. The little, green-fruited Physalis. 4. The large, American Physalis, with deeply sinuated leaves, brought over by Houston.

Claſs the Fifth Order the Firſt.

Diviſion the Sixth.

Pentandria Monogynia, with flowers compoſed of ſeveral petals.

GRONOVIA.

THE calyx is a perianthium, divided beyond the middle into five ſegments, which are erect, and of a ſemi-lanceolated figure; the whole is campanulated, coloured, and permanent. The corolla conſiſts of five extremely ſmall petals, of a roundiſh figure, and growing out of the inciſures of the cup: the ſtamina are five capillary filaments, of the length of the corolla; they are inſerted into the calyx, and ſtand alternately with the petals: the antheræ are erect and didymous: the germen is placed below the receptacle: the ſtyle is filiform, and longer than the ſtamina: the ſtigma is obtuſe. The fruit is a roundiſh capſule, coloured, and containing only one cell: the ſeed is ſingle, roundiſh, and large.

It is an American, but it ſtands in ſome of our gardens. The characters render a deſcription unneceſſary.

HEDERA.

THE involucrum of the pedicles is very ſmall, and divided into many ſegments: the perianthium of the flower is ſmall, placed on the germen, and divided into five ſegments: the corolla conſiſts of five oblong, patent petals, with their points bent: the ſtamina are five erect, ſubulated filaments, of the length of the corolla: the antheræ are incumbent, and bifid at the baſe: the germen is turbinated, and ſurrounded with the receptacle: the ſtyle is ſimple, and very ſhort: the ſtigma is ſimple. The fruit is a globoſe berry, having only one cell: the ſeeds are five in number, large, gibbous, and angulated on one part.

HEDERA. Tree Ivy.

The root is woody and ramified: the ſtem is woody, tough, and tortuous; it ſupports itſelf by twiſting round trees, or fixing it's radiculæ into their bark, or into walls, &c. and grows to ten, twenty, or more feet high. While young, it's leaves are oval and pointed; afterwards it produces angulated leaves, and, finally, often toward it's top oval or oblong ones again. In it's different ſtates it is called by authors, 1. Hedera humi repens. 2. Hedera helix. 3. Hedera arborea corymboſa: a fine way of multiplying ſpecies. It's flowers are ſmall and greeniſh; they ſtand in cluſters, and are ſucceeded by berries of the ſize of peas. Some of the ſeeds of the Ivy were lately produced, as falling from the clouds in a hail-ſtorm; and a diſtinguiſhed member of the Royal Society declared them to be the ſeeds of a wild garlic: they are eaſily diſlodged from trees and buildings by ſtorms, and the ſame miſtake of their being rained down has often happened; they have been ſometimes taken for wheat.

Another variety of this plant, with yellow berries, has been deſcribed by authors as a new ſpecies, under the names of Hedera poetica, and Hedera Dionyſias: Plumier has alſo deſcribed another variety of it, under the name of Hedera Americana folio haſtato.

The common Ivy is found in all parts of England. Authors call it, Hedera and Hedera arborea.

VITIS.

THE calyx of the Vitis is a perianthium ſo ſmall, as ſcarce to be diſcernible; it is divided into five parts: the corolla conſiſts of five ſmall, deciduous, rude petals, growing together at their extremities: the ſtamina are five deciduous, erecto-patent filaments: the antheræ are ſimple; the fruit is a large, round berry, containing only one cell: the ſeeds are five; they are oſſeous, ſemi-orbicular, but turbinate, cordated, and narrow at the baſe.

1. *Vitis*

1. *Vitis foliis palmato-angulatis* — The common Vine.
The palmato-angulated-leaved Vitis.

The root is woody and divaricated; the ſtem is angulated, and covered with a looſe, brown cruſt; the wood tough and fibrous: it grows, when properly ſupported, to twenty feet high: the leaves ſtand ſingly, on long pedicles; they are large, palmated, angulated, of a bright green, and ſoure taſte: the flowers are very ſmall and green, and the berries round.

This ſpecies varies extreamly in the ſize and colour of the fruit, and alſo of the leaf; and we owe to theſe varieties the names of a great number of imaginary ſpecies in the botanical writers.

This is a native of France, Italy, and Germany. C. Bauhine calls it, Vitis vinifera.

2. *Vitis foliis laciniatis.* — Parſley Vine.
The laciniated-leaved Vitis.

The root is woody and divaricated; the ſtem angular; the bark brown and looſe, or peeling; the leaves ſtand ſingle, on ſhorter pedicles than in the former, and are divided, to the middle, into a multitude of irregular ſegments: the fruit is large, round, and green.

This is a native of Germany. J. Bauhine calls it, Vitis apii folio.

3. *Vitis folio angulato ſerrato.* — Ivy Vine.
The angulated, ſerrated-leaved Vitis.

The root is fibrous, but woody; the ſtem ſlender, round, and tough; the bark is of a dark brown, and ſmooth; the leaves ſtand ſingly on long pedicles: they are of a kind of triangular figure, with two angular protuberances at the baſe; they are three inches long, and two broad: the fruit is ſmall.

This is a native of America. Plumier calls it, Vitis hederæ folio, ſerrato. Dr Hughes, in a late hiſtory of Barbadoes, has conſiderably increaſed the number of American vines, by adding all the Convolvuli, and indeed every other climbing plant to them, under the name of Vine.

RIBES.

THE calyx is a ventricoſe, one-leaved perianthium, divided into five oblong, obtuſe, hollow ſegments; they are coloured and permanent: the corolla conſiſts of five ſmall, obtuſe, erect petals, inſerted into the margin of the cup: the ſtamina are five, erect, ſubulated filaments, inſerted alſo into the cup; the antheræ are incumbent, compreſſed, and they ſplit at the edge: the germen is roundiſh, and ſtands below the cup: the ſtyle is bifid; the ſtigmata are obtuſe; the fruit is a globoſe, umbilicated berry, containing only one cell, with two lateral, oppoſite, longitudinal receptacles: the ſeeds are numerous, roundiſh, and ſomewhat compreſſed.

This genus comprehends the Ribeſium of Dillenius, and the Ribes and Groſſularia of other authors.

1. *Ribes inerme floribus planiuſculis, racemis pendulis.* — The Currant.
The pendulous-cluſtered Ribes, with plain flowers, and without prickles.

The root is woody, ramoſe, and fibrated; the ſtems ariſe many together, and grow to three, four, or five feet high; they are round, weak, covered with a pale bark, and full of pith: the leaves are broad, ſinuated, and ſerrated; the flowers are moderately large, and greeniſh; they hang in long cluſters, and are ſucceeded by round berries, of the ſize of peas.

The ſhrub is a native of Germany, and is cultivated every-where in gardens. The fruit varies in colour; and authors have hence made different ſpecies of it, under the names of Ribes fructu rubro, and Ribes fructu albo.

2. *Ribes*

2. *Ribes inerme floribus oblongis.* **The Black Currant.**
The long-flowered Ribes, without prickles.

The root is woody, ramose, and fibrated; the stems numerous, round, slender three feet high, and covered with a pale bark; the leaves are large, palmated, and sinuated, hairy underneath, and of a bad smell: the flowers are oblong and hollow; the berries black, and as big as a large pea; they are of a disagreeable taste.

It is a native of England, but is not common with us, except in gardens. J. Bauhine calls it, Ribes nigrum vulgo dictum folio olente.

3. *Ribes ramis subaculeatis reclinatis.* **The Purple Gooseberry.**
The reclinated and somewhat prickly-branched Ribes.

The root is woody, and divaricated; the stem an inch thick; the branches droop downwards, and have a smooth, pale bark; the leaves are short, broad, laciniated, and of a dark green: the squammæ of the buds, when they burst, have a number of capitated hairs round the edge: the fruit stands on single short pedicles, and is large, and of a blackish purple: the flowers are small and green.

This is a native of Germany, and is common in our gardens. Clusius calls it, Grossularia fructu obscure purpurascente.

The varieties of the Currant and Gooseberry are endless. Of the number of the certainly distinct species are, 1. The more prickly, narrow-leaved Ribes. 2. The less-prickly, smaller-leaved Ribes. 3. The broader, undivided-leaved, American Ribes. 4. The narrower, undivided-leaved, American Ribes.

CUPANIA.

THE calyx is a plane, permanent perianthium, formed of three oval, acute leaves, exceeding the petals in size: the corolla consists of five small, roundish, patent petals: the stamina are five subulated filaments, of the length of the corolla; the antheræ are roundish; the germen is oval; the style is very small and bifid: the stigmata are obtuse; the fruit is a coriaceous capsule, of a turbinato-oval figure, formed of three valves, and containing only one cell: the seeds are six in number, and roundish; each has a proper receptacle of a campanulated figure, crenated, and surrounding it.

It is an American, described by Plumier.

ITEA.

THE calyx is a very small, erect, acuminated, permanent perianthium, formed of one leaf, and divided into five segments at top. The corolla is composed of five long, lanceolated, acute, patent petals: the stamina are five, subulated, erect, filaments, of the length of the corolla: the antheræ are roundish; the germen is oval; the style cylindric, and of the length of the stamina, and permanent: the stigma is obtuse; the fruit is an oval capsule, of many times the length of the cup, mucronated with the style, and formed of two valves cohering at the points: the cell is single; the seeds are numerous and small.

It is a native of North America, and is described by Gronovius, in his Flora Virginica. The characters sufficiently distinguish it.

CELASTRUS.

THE calyx is a very small, plane perianthium, formed of one leaf, divided into five unequal, obtuse segments: the corolla consists of five equal, oval, patent, sessile petals, with their ends turned back: the stamina are five subulated filaments, of the length of the corolla; the antheræ very small; the germen is also very small, and is immersed in a large plane receptacle, marked with ten striæ: the style is subulated, and shorter than the stamina; the stigma is obtuse and trifid; the fruit is a coloured oval capsule, obtusely trigonal, gibbous, formed of three valves, and containing three cells,

cells, in each of which are ſome oval, coloured ſeeds, ſmooth, and half covered by a calyptra, which is alſo coloured, and has an unequal rim divided into four parts.

There is a ſpecies with a triple ſtigma, and no ſtyle.

CEANOTHUS.

THE calyx is a perianthium, formed of a ſingle leaf, divided into five ſegments at the edge: the corolla is compoſed of a number of arched petals, of a hollowed figure; the ſtamina are five filiform filaments; the germen is oblong; the ſtyle ſhort and ſlender; the ſtigma large; the fruit is an oblong, dry berry, with three cells in it, and three ſeeds in each.

Ceanothus corymbis folio longioribus.
The Ceanothus, with the corymbi longer than the leaves.

The root is woody and divaricated; the ſtem is a third of an inch in diameter, rarely more; the bark is of a pale brown: the branches are not numerous; their bark is reddiſh. The leaves ſtand irregularly; they have reddiſh pedicles, half an inch long, and are themſelves three inches long, an inch and half broad, and terminate in a point. They are of a pale green colour, and crenated at the edge: the flowers ſtand in large umbels, on the extremities of the branches; they are ſmall, white, and without ſmell; the fruit is ſmall, and of a browniſh red.

The ſhrub is a native of Virginia and Carolina. Plukenet calls it, Euonymus jujubinis foliis Carolinienſis, fructu parvo fere umbellato. Iſnard, Euonymoides Zizyphi foliis.

DIOSMA.

THE calyx is a perianthium, divided into five narrow, acute, permanent ſegments, and with a flat baſe: the corolla conſiſts of five oval, obtuſe, ſeſſile, erecto-patulous petals, of the length of the cup: the nectarium ſtands on the germen, in form of a corona, and is hollowed, obtuſe, and divided into five parts: the ſtamina are five ſubulated filaments: the antheræ are oval and erect: the germen is covered by the nectarium: the ſtyle is ſimple, of the length of the ſtamina; and the ſtigma is obſolete. The fruit conſiſts of five compreſſed, ovato-acuminated capſules, joined together by their inner edges with the points, diſtant from one another, and all opening at the upper part by a ſuture: the ſeeds are ſingle, oblong, of a depreſſed, oval figure, and pointed at the top; and each is wrapped up in a cartilaginous, elaſtic membrane. It is obſervable, the fruit of this Dioſma agrees with the fruit called Aniſum ſtellatum, not only in ſhape and ſtructure, but in ſmell.

Commelin and others have deſcribed the Dioſma under the name of Spiræa; but the difference is ſufficiently evident from the characters.

LAGOECIA.

THE univerſal involucrum is formed of eight leaves, which are pennato-dentated, ciliated, and reflex; this ſurrounds a number of pedicles, each of which has a ſingle flower on it, and the whole are collected into a head by it. The proper involucrum conſiſts of four capillaceo-pennated leaves, and ſurrounds a ſingle pedunclé, which is very ſhort. The proper perianthium ſtands on the germen, and is formed of five capillaceo-multifid leaves: the corolla conſiſts of five petals, very ſhort and bicornate: the ſtamina are five capillary filaments, of the length of the corolla; the antheræ are roundiſh; the germen is roundiſh: the ſtyle is of the length of the ſtamina: the ſtigma is ſimple: there is no perianthium: the ſeeds are ſingle, of an ovato-oblong figure, and coronated with the perianthium.

Of this genus there is only one known ſpecies.

LAGOECIA. **Round-headed Cummin.**

The root is compoſed of a cluſter of fibres: the ſtalk is round, hollow, and weak; it riſes to about ſix or eight inches high, and is divided into a multitude of ramifications: the leaves are four inches long, pinnated, and of a duſky green: the pinnæ are oblong, broad, and ſerrated at the edges. At the tops of the branches ſtand roundiſh heads, or cluſters of flowers; the whole head appears whitiſh and hairy. It is very ill referred, by authors, to the Cummin. It has neither the appearance, ſmell, or taſte of that plant: it's ſmell is more like that of the carrot.

It is a native of Syria; we have it in ſome of our gardens. Tournefort calls it, Cuminum orientale; Camerarius, Cuminum ſylveſtre; and C. Bauhine, Cuminum ſylveſtre capitulis globoſis.

BRUNIA.

THE common perianthium is roundiſh, imbricated, compoſed of a number of narrow, pointed leaves, and containing ſeveral flowers. The proper perianthium is compoſed of five oblong, hairy leaves, ſhorter than the corolla: the corolla conſiſts of five petals; their ungues are ſlender, and of the length of the cup; their bracteæ roundiſh and patent: the ſtamina are five capillary, flaccid filaments, longer than the corolla, and affixed to the ungues of the petals: the germen is very ſmall; the ſtyle is ſimple, and of the length of the corolla; the ſtigma is bifid; there is no pericarpium: the common receptacle of the fructifications ſeparates the perianthia by it's hairy ſquammæ: the ſeeds are ſingle, and ſomewhat hairy. Breynius calls this, Cypreſſopinulus, Cent. 1. 10.

CLAYTONIA.

THE calyx is a bivalve perianthium; the leaves are oval, erect, equal, obtuſe and permanent. The corolla conſiſts of five large, erect petals, of an oval, oblong figure, and emarginated: the ſtamina are five crooked, ſetaceous filaments, a little ſhorter than the corolla: the antheræ are oblong and incumbent: the germen is roundiſh; the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is bifid: the fruit is a capſule of a roundiſh figure, containing three cells, and in each three roundiſh ſeeds.

Claytonia foliis obverſe ovatis.
The obverſely-oval-leaved Claytonia.

The root is fibrous; the radical leaves are numerous, of an obverſely oval figure; the top being round and broad, the baſe narrow, and forming a furrowed pedicle below; they are ſmooth, nervous, and even at the edges: the ſtalk is round, and does not exceed the radical leaves in height; at it's top there ſtand two ſeſſile, obverſely oval, ſhort leaves, oppoſite to one another: the flowers are large, and of a beautiful red.

It is a native of Siberia; we have it in ſome of our gardens. It is deſcribed in the Stockholm Acts, under the name of Limnia.

CELOSIA.

THE calyx is a perianthium, formed of three acute, lanceolated, dry, permanent leaves, and reſembling a corolla: the corolla conſiſts of five erect, lanceolated, acute, rigid, and permanent petals: the nectarium is a very ſmall margin, ſurrounding the germen; the ſtamina are five ſubulated filaments, of the length of the corolla: the antheræ are verſatile; the germen is globoſe; the ſtyle is ſtrait, ſubulated, and of the length of the ſtamina: the ſtigma is ſimple: the fruit is a globoſe capſule, ſurrounded with the corolla. It is formed into only one cell, and opens horizontally: the ſeeds are roundiſh and emarginated.

Celoſia foliis lanceolato-ovatis.
The lanceolato-oval-leaved Celoſia.

Creſted Amaranth.

The root is oblong and thick; the ſtalk is round, thick, ſtriated, and of a mixed purple and green colour; toward the ground it is all over of a deep purple, and the bark full of a blood-coloured juice. It grows to four feet high; the leaves ſtand alternately, and at ſmall diſtances from one another; they are eight or ten inches long, narrow, of a deep green, and pointed at the extremity. On the top of the ſtalk, and of the ſeveral lateral branches, ſtand broad, and, as it were, reticulated ſpikes of flowers, of a beautiful purple. The whole ſpike is often a foot and half long, curled at the edges, and bending down with the weight of the top; they are often three or four inches broad.

It is a native of the Eaſt Indies. C. Bauhine calls it, Amaranthus panicula incurva; Camerarius, Amaranthus criſtatus. It is ſubject to great variations from culture. The colour of the ſpike, which is naturally of a fine ſtrong ſcarlet, will become of all the degrees of red, of a gold yellow, and of a thouſand admixtures of red, yellow, and green. To theſe accidental variations of the plant we owe the names of more than than thirty imaginary ſpecies in the botanical writers.

Of the number of theſe are the Amaranthus ſpicatus ſericeus flore luteo vireſcente; Amaranthus ſpicis carneis, &c. The error of confounding this with the Amaranthus is alſo a very groſs one: the characters are perfectly different.

Claſs the Fifth. Order the Firſt.

Diviſion the Seventh.

Pentandria Monogynia, with incompleat flowers.

ACHYRANTHUS.

THE calyx is a perianthium, compoſed of five lanceolated, acute, rigid, pungent, and permanent dry leaves; there is no corolla: the ſtamina are five ſhort filaments; the antheræ are ſmall; the germen is roundiſh; the ſtyle is ſimple, of the length of the ſtamina; the ſtigma is bifid. There is no pericarpium: the ſeed is ſingle, roundiſh, and compreſſed.

Dillenius has figured this plant in his Hortus Elthamenſis, but the characters alone are a ſufficient diſtinction.

THESIUM.

THE calyx is a turbinated, permanent perianthium, formed of a ſingle leaf, divided into five ſhort, ſemi-lanceolated, erect, obtuſe ſegments. There is no corolla, but the calyx, being coloured on the inſide, has paſſed for a corolla with ſome: the ſtamina are five ſubulated filaments, ſhorter than the cup, and affixed to the baſe of the ſegments: the antheræ are roundiſh; the germen is placed below the receptacle; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is thick and obtuſe: there is no pericarpium: the calyx holds in it's bottom a ſingle, roundiſh ſeed.

There is but one known ſpecies of this genus, and the characters ſufficiently diſtinguiſh it.

GLAUX.

THERE is no calyx. The corolla is a ſingle, campanulated, erect, permanent petal, divided into five obtuſe, revoluted ſegments: the ſtamina are five ſubulated, erect filaments, of the length of the corolla: the antheræ are roundiſh; the germen is oval; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is capitated: the fruit is a globoſe, but acuminated, capſule, formed of five valves, containing a ſingle cell, and in it five roundiſh ſeeds, with a great roundiſh receptacle, hollowed by the ſeeds.

GLAUX.

The root is a cluſter of ſhort, white fibres. The ſtalks are numerous, and grow to four or five inches long; they are procumbent in part, and ſend out many fibres from their joints, where they touch the ground. The leaves are ſmall, oblong, and ſtand two at a joint without pedicles: the flowers are ſmall, of a purpliſh colour, and ſtand in the alæ of the leaves.

The plant is frequent about our ſea-coaſts. C. Bauhine calls it, Glaux maritima; others, Glaux exigua maritima. The flowers are ſometimes white, ſometimes ſtriated with red, the ground colour being a duſky white.

ILLECEBERUM.

THE calyx is a permanent, pentangular perianthium, compoſed of five thick, erect, compreſſed leaves, each terminating in a hair, their tops diſtant, and the whole hollowed inward: there is no corolla. The ſtamina are five capillary filaments within the cup; the antheræ are ſimple; the germen is ovated and acute, and terminates in a ſhort ſtyle: the ſtigma is bifid: the fruit is a capſule, approaching to a roundiſh figure, but pointed at each end; formed of five valves, containing only one cell, and covered by the calyx. The ſeed is ſingle, large, roundiſh, and pointed at each end.

Illecebrum caulibus procumbentibus.
The procumbent-ſtalked Illecebrum.

The root is oblong, ſlender, white, and furniſhed with a number of fibres. The ſtalks are round, jointed, procumbent, of a reddiſh colour, and ſpread every way on the ground: the leaves are placed two at a joint; they are ſhort, of an oval figure, ſomewhat like the leaves of the ſerpyllum, and hollow. The joints are about an inch diſtant from each other; and, beſide theſe two leaves, there are a number of little white flowers, ſtanding in a kind of verticillate cluſters ſurrounding the ſtalks.

It is frequent in Cornwal and Devonſhire, in wet places. C. Bauhine calls it, Polygala repens nivea; J. Bauhine, Polygonum parvum flore albo verticillato.

Claſs the Fifth. Order the Firſt.

Diviſion the Eighth.

Pentandria Monogynia, with the ſegments of the corolla bent obliquely to the right.

CERBERA.

THE calyx is a ſmall, erect, acuminated perianthium, formed of a ſingle leaf, divided into five ſegments at the edge: the corolla conſiſts of a ſingle, infundibuliform petal, and the tube is elevated: the limb is large, and divided into five ſegments; they are lanceolated in figure, and bent to the right: the nectarium is pentangular, divided into five parts, erecto-ſtellate, and placed at the mouth of the tube: the ſtamina are five ſubulated filaments, placed in the middle of the tube; the antheræ are erect and connivent; the germen is globoſe; the ſtyle is filiform, and ſhort; the ſtigma is capitated; the fruit is a large, roundiſh, fleſhy drupe, marked with a longitudinal furrow on the ſide, and containing two cells, in each of which is a ſingle ſeed of an oval figure.

This genus comprehends the Cerbera and the Thevetia of Linnæus, for the characters are the ſame; and the Ahovai of Tournefort.

1. *Cerbera foliis lanceolatis.*
The lanceolated-leaved Cerbera.

The root is large and brachiated; the tree grows to thirty feet high, or more: it's trunk is often two feet in diameter: the bark is of a pale, whitiſh colour, and ſmooth; the

the wood moderately firm: when the young branches are cut, they emit a milky juice, and both this and the dry wood ſtink ſo intolerably, that the natives cannot uſe the wood ſo much as to burn; the ſmell is much like that of human excrement: the leaves remain green all the year; they are three inches long, two broad, and of a lanceolated ſhape. The flower is moderately large; the fruit poiſonous.

It is a native of the Eaſt and Weſt Indies. Tournefort calls it, Ahovai Theveti.

RAUVOLFIA.

THE calyx is a very ſmall, permanent perianthium, divided into five ſegments: the corolla is a ſingle petal, of an infundibuliform ſhape: the tube is cylindrico-globoſe: the limb is plane, and is divided into five roundiſh, truncated ſegments: the ſtamina are five filaments, ſhorter than the tube; the antheræ are erect and ſimple: the germen is roundiſh; the ſtyle is very ſhort; the ſtigma capitated: the fruit is a large, globoſe berry, lacteſcent, containing only one cell, and in it two compreſſed, cordated ſeeds.

It is an American, deſcribed by Plumier, 40.

VINCA.

THE calyx is an erect, acute, permanent perianthium, formed of one leaf, divided into five ſegments: the corolla conſiſts of a ſingle, hypocrateriform petal: the tube is longer than the cup, and is cylindric at the bottom; broader toward the top, marked with five lines, and has a pentagonal mouth. The limb is horizontal, and divided into five ſegments, growing to the top of the tube, broader upwards, and obliquely truncated at the top: the ſtamina are five very ſhort, inflex, and retroflex filaments: the antheræ are membranaceous, obtuſe, erect, crooked, and loaded with farina at each ſide: the germina are two, and roundiſh, and at their ſides lie two other roundiſh bodies: the ſtyle is ſingle, common to both; it is cylindric, and of the length of the ſtamina: the ſtigmata are two, and perpendicular; the lower one is orbicular and plane; the upper one is capitated and hollowed. The pericarpium conſiſts of two erect, cylindric, long folliculi, formed of one valve, and opening longitudinally: the ſeeds are numerous, oblong, cylindric, and ſulcated.

Vinca foliis ovatis. **Common Periwinkle.**
The oval-leaved Vinca.

The root is fibrous; the ſtalks are procumbent, and take root, as they run along the ground, often growing thus to a great length: the leaves ſtand in pairs; they have ſhort pedicles, and are of an oval figure, about an inch long, of a dark green colour, ſhining, even at the edges, and thick and rigid. The flowers ſtand ſingly on pedicles of three inches long, ariſing from the alæ of the leaves; they are large, and of a beautiful blue.

It is common in England, but probably only as it has eſcaped from gardens; in Germany it is native. C. Bauhine calls it, Clematis daphnoides minor; Dodonæus, Clematis daphnoides. Tournefort has made eight or ten ſpecies out of this, differing in ſize, and in the colour of the flower, as the red, white, &c.

NERIUM.

THE calyx is a very ſmall, acute, permanent perianthinm, divided into five ſegments at the top; the corolla conſiſts of a ſingle, infundibuliform petal: the tube is cylindric, and ſhorter than the cup; the limb very large, and divided into five broad, obtuſe, oblique ſegments: the nectarium is ſhort, and torn, as it were, into a number of capillary ſegments; it forms a corona, terminating the tube: the ſtamina are five very ſhort filaments, in the tube of the corolla: the antheræ are ſagittated, connivent, and terminated by a long filament: the germen is roundiſh and bifid; the ſtyles are very ſhort; the ſtigmata ſimple: the fruit conſiſts of two cylindric, acuminated, long, erect follicles, formed each of one valve, and opening longitudinally: the ſeeds

are numerous, oblong, coronated with a downy matter, and placed in an imbricated manner.

Nerium foliis ternis lineari-lanceolatis. Roſe-
The Nerium, with lineari-lanceolated leaves, three at a joint. bay.

The root is woody and branched: the trunk is woody, an inch and a half in diameter, often much more, and grows to eight, or more, feet high; it divides into many branches, which ſtand erect, and are furniſhed with leaves, uſually three at a joint; theſe are four inches long, an inch broad, nearly of the ſame diameter all the way, only riſing from a narrow baſe, and terminating in a point; they are rigid, and of a greyiſh colour. The flowers ſtand in cluſters, on the tops of the branches; they are very large, and of a beautiful red, ſometimes white.

It is a native of Syria and the Eaſt Indies, and of ſome of the ſouthern parts of Europe, and is frequent in our gardens. Dodonæus calls it, Rhododendrum; Lobel, Oleander and Laurus roſea; C. Bauhine, Nerium rubro flore.

The other ſpecies are, 1. The tuberous-rooted, ſcandent Nerium. 2. The narrower-leaved, Indian Nerium: and, 3. The broader-leaved, ſmaller-flowered, Indian Nerium.

PLUMERIA.

THE calyx is an extremely ſmall, obtuſe perianthium, divided into five parts: the corolla conſiſts of a ſingle, infundibuliform petal: the tube is long, and grows broader towards it's top: the limb is erecto-patent, and divided into five oblong, oval ſegments, bent toward the right: the ſtamina are five ſubulated filaments, growing out of the middle of the tube: the antheræ are connivent: the germen is oblong and bifid: there are ſcarce any ſtyles: the ſtigma is double and acuminated. The fruit is compoſed of two long, pointed, ventricoſe follicles, formed of a ſingle valve each, and containing a ſingle cell, and naturally bending downwards, and nutant: the ſeeds are numerous, oblong, imbricated, and inſerted into a large, oval membrane, at the baſe.

CAMERARIA.

THE calyx is a very ſmall, acute, connivent perianthium, formed of a ſingle leaf, divided into five parts: the corolla conſiſts of a ſingle, infundibuliform petal: the tube is cylindric, long, and ventricoſe both at the baſe and at the top: the limb is plane, and is divided into five lanceolated ſegments: the ſtamina are five very ſmall filaments, placed in the middle of the tube: the antheræ are connivent: the germina are two, and have two appendages at their ſides: there are ſcarce any ſtyli, and the ſtigmata are obſolete. The fruit is compoſed of two oblong follicles, bent horizontally, obtuſe at both ends, and ſending out a lobe on each ſide near the baſe; they are formed each of one valve, and have only one cell. The ſeeds are numerous, oval, and imbricated, and inſerted into a large, oval membrane at the baſe.

It is an American, deſcribed by Plumier.

TABERNOMONTANA.

THE perianthium is very ſmall, divided into five parts, acute and connivent: the corolla conſiſts of a ſingle, infundibuliform petal: the tube is cylindric and long; the baſe and apex of it are both ventricoſe: the limb is divided into five linear, obtuſe ſegments: the ſtamina are five very ſmall filaments, placed in the middle of the tube: the antheræ are connivent: the germina are two, and ſimple: the ſtyle is ſubulated; the ſtigmata are obſolete. The fruit is compoſed of two follicles, bent horizontally, ventricoſe and acuminated, formed of one valve, and containing one cell: the ſeeds are numerous, of an oblong, oval figure, obtuſe, imbricated, and wrapped up in pulp.

It is common to America and to the Eaſt Indies, and is deſcribed by Plumier, and in the Hortus Malabaricus, 1. 46.

CEROPEGIA.

CEROPEGIA.

THE calyx is a ſmall, permanent perianthium, formed of a ſingle leaf, divided into five ſhort ſegments at the end: the corolla conſiſts of a ſingle petal: the baſe is large and globoſe; the tube which terminates this is cylindric and long: the limb is very ſmall, quinquedentated, acuminated with the tops of the ſegments, connivent, and open at their ſides: the ſtamina are five ſmall, crooked, connivent filaments, at the bottom of the corolla: the antheræ are ſmall; the germen is extreamly ſmall; there is ſcarce any ſtyle: the ſtigmata are two. The fruit is compoſed of two cylindric and very long follicles, ſtrait, acuminated, formed each of one valve, and containing one cell: the ſeeds are oblong, numerous, imbricated, and crowned with down.

It is a native of the Eaſt Indies, and is deſcribed in the Hortus Malabaricus, 9, 16.

Claſs the Fifth. Order the Second.

PENTANDRIA DIGYNIA.

Plants which have in each flower five ſtamina and two ſtyles.

OF theſe there are ſeveral diſtinct ſeries, to be ſeparated into ſo many diviſions: 1. Some have the ſegments of the corolla bent obliquely to the right. 2. Some have only one ſeed after each flower. 3. Others have ſeveral ſeeds after each. 4. Some have two naked ſeeds and a ſimple umbel. 5. Some have two naked ſeeds, and a univerſal and partial involucrum. 6. Some have two naked ſeeds, with only a partial involucrum. 7. Some have two naked ſeeds, and no involucrum.

Claſs the Fifth. Order the Second.

Diviſion the Firſt.

Pentandria Digynia, with the ſegments of the corolla bent obliquely to the right.

STAPELIA.

THE calyx is a perianthium, formed of one leaf, divided into five ſegments, acute, ſmall, and permanent: the corolla conſiſts of a ſingle, large, plane petal, divided beyond the middle into five ſegments, which are broad, plane, and acuminated: the nectarium is a plane, little ſtar, of five points; the ſegments are linear, their apices lacerated, and they ſurround the parts of fructification; and there is alſo another plane, little ſtar, of five acute, undivided rays, covering the ſame parts: the ſtamina are five plane, erect, broad filaments: the antheræ are linear, and affixed each way to the ſide of the filament: the germina are two, of an oval figure, and plane within: there are no ſtyles: the ſtigmata are obſolete. The fruit conſiſts of two oblong, ſubulated follicles, formed of one valve, and containing one cell: the ſeeds are numerous, imbricated, compreſſed, and pappoſe: in ſome ſpecies there is a plane, orbicular body, placed under the ſtars.

Stapelia denticulis ramorum extrorſum prominulis.

The Stapelia with the denticles of the branches prominent outwards.

The root is compoſed of four white fibres. The ſtalk is ſucculent, of the thickneſs of a man's finger, and not more than eight or ten inches long, uſually procumbent, ſometimes riſing obliquely; while young, green, but afterwards purple: it is divided into a number of ramifications, and is of a kind of trigonal figure, denticulated, and the denticles riſing into a kind of tubercles, armed with prickles; it is full of an acrid juice,

juice, and has no leaf on it. In the alæ of the denticles there ſtand ſhort, ſucculent, greeniſh, or purpliſh, pedicles, divided into three fine, foliaceous points at the extremity, and each ſupporting a large yellow flower.

It is a native of the Cape of Good Hope. Herman calls it, Apocynum humile aizoides ſiliquis erectis Africanum.

ASCLEPIAS.

THE calyx is a permanent perianthium, divided into five ſegments, acute and ſmall: the corolla conſiſts of a ſingle petal, plane or reflex, divided into five oval, acuminated ſegments: the nectaria are five in number, and ſurround the parts of fructification; each of them is of an oval figure, but obliquely auriculated outward, and, from the baſe of this auricle, ariſes an acute corniculum, bent towards the parts of fructification: the parts of fructification are covered by a truncated body, ſurrounded with five ſquammulæ, and opening at the ſides by a many fiſſures; there are ſcarce any filaments: the antheræ are five; they are affixed to the truncated body of the nectarium, within the ſquammulæ: the germina are two, of an oval figure, and acuminated: there are ſcarce any ſtyles; the ſtigmata are ſimple. The fruit conſiſts of two large, oblong follicles, ventricoſe, and pointed, formed each of one valve, and containing only one cell: the ſeeds are numerous, imbricated, and winged with down: the receptacle is membranaceous and free.

This genus comprehends the Aſclepias and the Apocynum of authors. In the Aſclepias the corolla is plane, in the Apocynum it is reflex; but, as the nectaria, and all the other parts of fructification, are alike in both, this is to be regarded no more than as a ſpecific, not a generical difference.

1. *Aſclepias caule erecto ſimpliciſſimo herbaceo, foliis cordato-lanceolatis, racemis conglomeratis alternis.*
The erect, herbaceous, ſimple-ſtalked Aſclepias, with cordated-lanceolated leaves, and alternate, conglomerated cluſters.

White Swallow-Wort.

The root is fibrous and white: the ſtalk is round, thick, hairy, jointed, erect, and without divarication. The leaves ſtand two at a joint; they are two inches long, an inch broad, cordated at the baſe, and lanceolated; they ſtand on very ſhort pedicles, which riſe upwards; the ribs are hairy. From the alæ of the leaves ariſe pedicles, on each of which ſtands a cluſter of white, ſmall flowers: the pods are an inch and a half long, and the ſeeds winged with a very fine down.

This is a native of Germany. C. Bauhine calls it, Aſclepias flore albo; Dodonæus, Vincetoxicum.

2. *Aſclepias caule ſubvolubili herbaceo, foliis ovatis lanceolatis, floribus confertis patentiſſimis.*
The herbaceous-ſtalked Aſclepias, with oval, lanceolated leaves, and open, cluſtered flowers.

Black Swallow-Wort.

The root is compoſed of a number of large fibres. The ſtalk is round, tender, weak, and ſupports itſelf by twining about any thing near it; by this means it will be carried to four or five feet high: toward the top it is uſually branched. The leaves are large, oblong, ſomewhat oval, but pointed at the extremity; they are ſmooth, ſoft, and ſucculent. The flowers ſtand in cluſters, and are ſmall, patent, and of a very deep purple, almoſt black. The pods are long, and the ſeed winged with a very fine down. The whole plant abounds with an acrid, milky, but yellowiſh, juice.

It is a native of France and Germany. C. Bauhine calls it, Aſclepias pullo flore; J. Bauhine, Aſclepias flore nigro quorundam.

3. *Aſclepias*

3. *Asclepias caule erecto simplici herbaceo, foliis ovalibus subtus tomentosis, umbellis nutantibus.* **Syrian Dog's-bane.**
The simple, erect, herbaceous-stalked Asclepias, with oval leaves and nutant umbels.

The root is composed of a multitude of large fibres. The stalk is round, erect, and hairy; it grows to four feet high. The leaves stand in pairs; they are large, and of an oblong, oval figure, of a dusky green on the upper side, but whitish and hairy underneath. The flowers are small and purple; they stand a great number together, forming a kind of umbel.

It is a native of Syria. Cornutus calls it, Apocynum majus Syriacum rectum; Vesslingius, Beidelossar.

4. *Asclepias foliis rotundo-ovatis, caule fruticoso.* **Round-leaved Dog's-bane.**
The shrubby-stalked, roundish-oval leaved Asclepias.

The root is fibrous; the stalk is round, hard, woody, not very thick, and divides into several branches. The leaves are almost round, or between that and oval; they are smooth, green, and of a shining surface. The flowers are small, and of a pale red.

It is a native of Egypt. Vesslingius calls it, Apocynum folio rotundiore. We have it frequently in our gardens.

The other species of the Asclepias are very numerous. The more singular are, of those called by authors Asclepiades, 1. The narrow-leaved, yellow Asclepias. 2. The Cretic Asclepias, with bifid pods. 3. The tall, erect, purple Asclepias. 4. The broad-leaved, purple Asclepias. Of those called Apocyna, 1. The broad-leaved, hoary Apocynum of Malabar. 2. The broad-leaved, purple, American Apocynum. 3. The green-stalked, white-flowered, Syrian Apocynum. 4. The long-podded, long-leaved Apocynum. 5. The willow-leaved, purple Apocynum. 6. The tuberous-rooted, orange-flowered Apocynum. 7. The nerium-leaved Apocynum. 8. The undulated-leaved, hairy Apocynum. 9. The periwinkle-leaved Apocynum. 10. The digitated-leaved Apocynum. 11. The orange-leaved Apocynum. 12. The Apocynum of the Canaries. 13. The narrow toad, flax-leaved Apocynum. 14. The round-leaved, scandent Apocynum.

PERIPLOCA.

THE calyx is a very small perianthium, divided into five oval, permanent segments: the corolla consists of a single petal, plane, and divided into five oblong, linear, truncated, and emarginated segments: the nectarium is very small, and surrounds the center of the petal, and emits five crooked filaments from it's sides, shorter than the segments of the corolla, and placed alternately with them: the stamina are five very short filaments: the antheræ are erect and connivent: the germen is small and bifid: there are scarce any styles: the stigmata are simple. The fruit consists of two large, oblong, ventricose follicles, each formed of a single valve, and containing one cell: the seeds are numerous, imbricated, and coronated with down: the receptacle is longitudinal and capillary.

1. *Periploca foliis lanceolatis, caulibus fruticosis volubilibus.* **Climbing Dog's-bane.**
The shrubby, twining-stalked Periploca, with lanceolated leaves.

The root is woody, and divaricated; the stalks are round, slender, woody, and covered with a brown bark; they rise by the help of trees, which they twist themselves about, to the height of thirty feet. The leaves stand in pairs; they are oblong, broadest in the middle, and pointed at the end. The flowers stand four or five together, forming a kind of umbel; they are small, and of a dusky purple.

It is a native of many parts of America. C. Bauhine calls it, Apocynum oblongo folio; others, Periploca repens angustifolia, and Periploca folio longo flore purpurante.

The other ſpecies of Periploca are, 1. The narrow-leaved Periploca. 2. The roundiſh-leaved Periploca. 3. The acute-leaved Periploca. 4. The echinated-fruited Periploca. 5. The hard-podded Periploca. 6. The climbing, willow-leaved Periploca. 7. The procumbent, diffuſe, toad, flax-leaved Periploca. 8. The citron-leaved, purple, umbellated-flowered Periploca. 9. The ſhort and roundiſh-leaved Periploca. 10. The ſagittated-leaved Periploca. 11. The citron-leaved Periploca, with great fruit.

CYNANCHUM.

THE calyx is a very ſmall, erect, permanent perianthium, divided into five ſegments: the corolla conſiſts of a ſingle petal: there is ſcarce any tube: the limb is plane, and is divided into five long, linear ſegments: the nectarium is placed in the center of the flower; it is long, erect, cylindric, and divided into five parts at the top: the ſtamina are five parallel filaments, of the length of the nectarium: the antheræ are contingent, and are placed within the mouth of the corolla: the germen is oblong and bifid: there is ſcarce any ſtyle: the ſtigmata are two, and obtuſe. The fruit is compoſed of two oblong, acuminated follicles, formed each of one valve, and containing one cell; they open longitudinally, and contain numerous, oblong ſeeds, placed imbricatedly, and winged with down.

Cynanchum caule volubili, foliis cordato-lanceolatis glabris.
The climbing Cynanchum, with cordato-lanceolated, ſmooth leaves.

The root is oblong, creeping, brittle, and white. The ſtalk is firm and climbing; it winds itſelf about any thing near, and is ſo carried up to a great height. The leaves are two inches long, and an inch and a half broad; they are cordated, and ſurround the ſtalk at the baſe, from whence they gradually become ſmaller to the point; they are ſo full of milky juice, that the leaſt bruiſe brings it out in abundance. The flowers are ſmall and white; they ſtand in umbels all along the ſtalks.

It is a native of Perſia, and ſome of the ſouthern parts of Europe; we have it in gardens. Dodonæus calls it, Periploca prior; J. Bauhine, Apocynum latifolium amplexicaule.

APOCYNUM.

THE calyx is a perianthium, formed of one leaf, divided into five ſegments at the end, erect, ſmall, and permanent: the corolla conſiſts of a ſingle petal, of a campanulated, roundiſh form, lightly divided into five ſegments, which are revolute; there is no other nectarium. The ſtamina are five filaments, ſcarce viſible: the antheræ are oblong, erect, acute, bifid at the baſe, and connivent: the germina are two, and oval: the ſtyles are ſcarce viſible: the ſtigmata are globoſe, and as large as the germina. The fruit is compoſed of two oblong, acuminated follicles, each formed of one valve, and containing one cell: the ſeeds are numerous, very ſmall, and coronated with long down: the receptacle is ſubulated, very long, rough, and free.

1. *Apocynum foliis lanceolatis, corymbis terminatricibus.*
The lanceolate-leaved Apocynum, with terminatory corymbi.

The root is creeping, white, and moderately thick: the ſtalk is round, thick, rigid, and ſmooth. The leaves are three inches long, and an inch and a half broad; they are placed in pairs, and are broadeſt in the middle, and terminate in a point. The flowers ſtand only at the tops of the branches, in large tufts or umbels, as it were; they are moderately large, and of a beautiful pale red. The plant grows to four feet high.

It is a native of Syria and Greece, but we have it in our gardens. J. Bauhine calls it, Apocynum oblongo lato folio.

2. *Apocynum*

2. *Apocynum foliis ovatis.*
The oval-leaved Apocynum.

This is a low plant: the root is creeping, and of the thickneſs of a crow-quill. The ſtalks are woody, and a foot high; they are round, ſmooth, and divided into ſeveral ramifications. The leaves ſtand in pairs, on ſhort pedicles; they are an inch and a half long, and an inch broad, of a figure approaching to oval, and of a deep green colour. The flowers are of the ſize of thoſe of the lilly of the valley, and ſomewhat reſemble them in ſhape; they are of a beautiful pale red.

It is a native of America. Boccone calls it, Apocynum Canadenſe foliis androſæmi majoris; Ray, Apocynum flore lillii convallii. We have it in our gardens.

Claſs the Fifth. Order the Second.

Diviſion the Second.

Pentandria Digynia, with only one ſeed after each flower.

HERNIARIA.

THE calyx is a one-leaved perianthium, divided into five ſegments at the end, acute, patent, coloured on the inſide, and permanent: there is no corolla: the ſtamina are five very minute filaments: the antheræ are ſimple: the germen is oval: the ſtyle is very ſhort, ſcarce viſible: the ſtigmata are two, acuminated, and of the length of the ſtyle. The fruit is a ſmall capſule, placed in the bottom of the cup, covered, and hardly ſplitting: the ſeed is ſingle, ovato-acuminated, and ſmooth.

This genus comprehends the Herniaria and Parenychiodes of Tournefort.

1. *Herniaria floſculorum glomerulis ſubrotundis.* **Rupture-wort.**
The Herniaria, with roundiſh tufts of flowers.

The root is compoſed of a cluſter of white fibres: the ſtalks are round, procumbent, very much branched, and not more than two or three inches in length. The leaves are very ſmall; they ſtand two at a joint, and are pointed at the end, and of a pale yellowiſh-green; all along the ſides of the ſtalks ſtand ſhort and roundiſh cluſters of flowers. They are very minute, and of a yellowiſh colour.

The plant is a native of England, eſpecially of the weſtern counties. It's leaves are uſually ſmooth, but ſometimes it varies from this, and they are hairy. The botanical writers have, from this, divided it into two ſpecies, under the names of Herniaria glabra and Herniaria hirſuta. C. Bauhine calls it, Polygonum minus, ſive Millegrana major; Royen and Haller, Herniaria calycibus bracteæ nudis.

2. *Herniaria floſculorum glomerulis oblongis.*
The Herniaria, with oblong cluſters of flowers.

This is a very beautiful little plant. The root is fibrous; the ſtalks are procumbent, and ſpread every way upon the ground; they are round, ſlender, ſmooth, jointed, and four or five inches long; the leaves are very ſmall, and of a pale green, broadeſt in the middle, and pointed at the ends; they ſtand in pairs. From the alæ of theſe, all along the ſtalk, there grow cluſters of flowers; theſe are an inch long, and are compoſed of multitudes of fine white, ſilvery ſquammulæ, ſet very thick together: among theſe ſquammulæ are numbers of very minute, white flowers.

It is a native of Spain, Italy, and ſome other parts of Europe. J. Bauhine calls it, Paronychia Hiſpanica Cluſii, ſive Anthyllis niveà; C. Bauhine, Polygonum minus candicans.

3. *Herniaria*

3. *Herniaria floſculorum glomerulis ovatis.*
The Herniaria, with oval cluſters of flowers.

The root is fibrous; the ſtalks are procumbent, round, ſmooth, and eight inches long. The leaves ſtand in pairs, and are a third of an inch long, and a quarter of an inch broad, pointed at the ends, and of a pale green colour. The cluſters of flowers are ſhort and oval, and not very compact: the flowers are white.

It is a native of Spain and Italy. Tournefort calls it, Paronychia Hiſpanica ſupina alſine-folia capitulis minus compactis.

The other ſpecies of Herniaria are, 1. The narrow-leaved, erect Herniaria. 2. The broad-leaved, procumbent Herniaria. 3. The ſhrubby, myrtle-leaved Herniaria. 4. The echinated-leaved Herniaria.

SALSOLA.

THE calyx is a perianthium, compoſed of five oval, peltato-obtuſe, permanent leaves: there is no corolla. The ſtamina are five very ſhort filaments, ariſing from the leaves of the calyx: the germen is globoſe: the ſtyle is ſhort, and divided into two parts: the ſtigmata are crooked. The fruit is a globoſe, unilocular capſule, covered with the cup: the ſeed is ſingle, large, and ſpiral, like a ſnail.

This genus comprehends the Kali of Tournefort and others.

1. *Salſola inermis foliis lanceolatis.* **Smooth Glaſswort.**
The lanceolated-leaved Salſola, without prickles.

The root is fibrous; the ſtalks are round, thick, and ſucculent, and uſually of a purpliſh colour; toward the tops they are divided into a multitude of branches. The leaves are large toward the bottom, but very ſmall toward the tops, broad at the baſe, and growing ſmaller to the point. The flowers are ſmall and greeniſh; the ſeeds beautifully contorted, or twiſted in a ſpiral manner.

It is common on the ſea-coaſts in many parts of Europe, and is cultivated alſo in many places for making a kind of pot-aſh. C. Bauhine calls it, Kali majus ſemine cochleato; J. Bauhine, Kali vulgare.

2. *Salſola foliis lineari-lanceolatis pungentibus.*
The Salſola, with lineari-lanceolate, pungent leaves.

The root conſiſts of a cluſter of fibres: the ſtalk is round, thick, ſucculent, and of a duſky green colour; it grows to eight or ten inches, ſometimes more, in length, and is uſually very much branched: the leaves ſtand at ſmall diſtances; they are an inch in length, narrow, and of a lineari-lanceolate figure, terminating with a ſharp ſpine. The whole leaf, as well as the ſtalk, is full of juice, and thick, only the ſpine is dry, and ſomewhat rigid. The flowers are ſmall and green; they ſtand in the alæ of the leaves: the ſeed is beautifully ſpiral, the cup prickly.

This is frequent on the coaſts of the Mediterranean, and is cultivated in ſome places for making an Alkali ſalt. C. Bauhine calls it, Kali ſpinoſum cochleatum; Matthiolus, Fragus ſpinoſus.

The other ſpecies are, 1. The procumbent, ſhort-leaved Salſola, from which the bariæa, or fineſt pot-aſh, is made. 2. The thick, ſhort-leaved Salſola. 3. The woody Salſola, with membranaceous flowers. 4. The ſhrubby, tamariſk-leaved Salſola. 5. The ſhrubby, Spaniſh, broom-leaved Salſola. 6. The capillaceous-leaved, ſhrubby Salſola. 7. The trifid-leaved, prickly Salſola. 8. The large-flowered, ſhrubby Salſola. 9. The woolly-ſhrub Salſola. 10. The toad-flax-leaved Salſola. 11. The prickly, capillaceous-leaved, ſhrubby Salſola.

GOMPHRENA.

THE calyx is a perianthium, formed of three leaves, and of a compreſſed figure; two of the leaves are navicular, carinated on the outſide, and have their interior edges connivent; the third is ſmall and incumbent; ſidewiſe they are all coloured and

and permanent. The corolla is divided into five parts, and erect; the petals are ſubulated and permanent: the nectarium is a cylindric tube, of the length of the corolla, divided into five ſhort, patulous ſegments at the mouth: the ſtamina are five ſcarce, viſible filaments, placed in the mouth of the nectarium; the antheræ cover the mouth of it: the germen is oval with a point; the ſtyles are two and ſmall: the ſtigmata are ſimple, and of the length of the ſtamina: the fruit is a thin, roundiſh cruſt, with one cell, containing a ſingle, large, roundiſh ſeed, with an oblique end.

This genus comprehends the Amaranthoides of Tournefort and others.

1. *Gomphrena caule erecto, foliis ovato-lanceolatis, capitulis ſolitariis, pedunculis diphyllis.* **Purple everlaſting flower.**
The erect, ovato-lanceolate-leaved Gomphrena, with ſingle heads on two-leaved peduncles.

The root conſiſts of a cluſter of white fibres: the ſtalk is round, hairy, erect, rigid, and branched. It grows to two feet high; the joints are protuberant, and two inches diſtant: the leaves ſtand on ſhort pedicles; they are two inches long, an inch and a quarter broad, and pointed at the ends, of a pale greyiſh-green and hoary. On the tops of the branches ſtand the heads of flowers; they are roundiſh, of the bigneſs of a nutmeg, and of a beautiful purple colour, ſometimes white: the pedicles have two leaves on them uſually, ſometimes four: the heads are compoſed of a multitude of looſe ſquammulæ.

The plant is a native of both the Eaſt and Weſt Indies; we have it in our gardens. Herman calls it, Amaranthoides Indicum foliis ocymaſtri capitulis purpureis.

2. *Gomphrena caulibus procumbentibus, foliis lineari-lanceolatis.*
The procumbent Gomphrena, with lineari-lanceolate leaves.

The root is fibrous: the ſtalk grows to eight or ten inches long; it lies on the ground, and is much branched: the leaves are half an inch long, very narrow, and pointed at the ends. The heads are ſmall, and of a beautiful ſilvery white.

It is a native of America, and is found about the ſea-coaſts. Plumier calls it, Amaranthoides maritima repens.

CHENOPODIUM.

THE calyx is a perianthium, formed of five oval, hollow leaves, with membranaceous edges; the whole hollow and permanent: there is no corolla. The ſtamina are five ſubulated filaments, placed oppoſite to the leaves of the cup, and of the ſame length with them: the antheræ are roundiſh and didymous; the germen is orbiculate; the ſtyle is ſhort, and divided into two parts; the ſtigmata are obtuſe: there is no pericarpium. The cup becomes ſhut, of a pentagonal figure, with five compreſſed angles, and is deciduous: the ſeed is ſingle, orbicular, and depreſſed: the ſtyle is, in ſome ſpecies, divided into three parts; but the ſhape of the cup, containing the ſeed, diſtinguiſhes it from all other genera.

1. *Chenopodium foliis triangulari-ſagittatis integerrimis.* **Engliſh Mercury.**
The triangular, ſagittated-leaved Chenopodium.

The root is large, oblong, yellowiſh, and furniſhed with a number of fibres. The ſtalks are thick, hollow, ſtriated, and of a pale green colour, purpliſh toward the baſe; they are, in part, procumbent; in part, obliquely erect: the leaves are three inches long, and two broad at the baſe; triangular, and ſagittated; of a pale green, and covered in part with a quantity of looſe, greyiſh globules, fattiſh to the touch: the top of the ſtalks terminate in long ſpikes, of little yellowiſh-green flowers, very thick ſet together.

The plant is common with us in uncultivated places. C. Bauhine calls it, Lapathum unctuoſum; J. Bauhine, Bonus Henricus. The tops of it are eaten, boiled; and a decoction of the leaves uſed in emollient clyſters.

2. *Chenopodium foliis cordato-triangularibus obtusiusculis, dentatis, racemis erectis compositis.* Goose-foot.
The triangular, cordated-leaved Chenopodium, with erect, compound clusters of flowers.

The root is long, thick, and woody: the stalk is thick, striated, and three feet high: the leaves are three inches long, triangular, but somewhat cordated at the base, and of a bright green colour: the clusters of flowers are large, and composed of shorter clusters; they are of a green colour, with a mixture of yellowness, and stand at the top, and along the sides of the plant.

It is common with us on dunghils. C. Bauhine calls it, Atriplex sylvestris latifolia.

3. *Chenopodium foliis rhombeo-ovatis integerrimis.* Stinking Orach.
The rhombeo-oval-leaved Chenopodium.

The root is slender, oblong, and woody; the radical leaves are three quarters of an inch long, and more than half an inch broad; they stand on long pedicles. The stalks are partly procumbent, partly obliquely erect; they are round, striated, and a foot long: the leaves stand alternately on them, and are like the radical ones, but shorter and smaller: the flowers stand in short and thick tufts, all down the sides of the main stalk, on short branches. The whole plant is of a whitish colour, and covered with loose, dusty globules; it's smell is very offensive.

It is common with us about dunghils. Tournefort calls it, Chenopodium fœtidum; Ray, Blitum fœtidum vulvaria dictum.

The other species of Chenopodium are, 1. The triangular, dentated, thick-clustered Chenopodium. 2. The purplish-clustered, foliose-clustered Chenopodium. 3. The naked-clustered, triangular-leaved Chenopodium. 4. The sinuated, whitish-leaved Chenopodium. 5. The stramonium-leaved Chenopodium. 6. The narrow-leaved, laciniated Chenopodium. 7. The many-seeded Chenopodium. 8. The subulated-leaved Chenopodium, called white Glosswort, and Kali minus album.

BETA.

THE calyx is a hollow, permanent perianthium, formed of five ovato-oblong, obtuse leaves: there is no corolla. The stamina are five subulated filaments, of the length of the leaves of the cup, and placed opposite to them; the antheræ are roundish: the germen is placed below the receptacle; the styles are two, very short and erect; the stigmata are acute: the fruit is a capsule, placed within the cup at the base; it contains only one cell, and is deciduous: the seed is single, kidney-shaped, compressed, and surrounded every way by the cup.

Of this genus there is only one species; but this, from it's varying in the colour of the stalks, leaves, &c. from a pale whitish green to a blood-red, and in other particulars, has been described as different species, under the names of Beta alba and Beta rubra, &c.

BETA. Beet.

The root is long and thick; often an inch and half in diameter, and more than a foot in length: the radical leaves are eight inches long, and five broad; of a pale green, a whitish, or a blood-red colour: the stalk is very thick, roundish, striated, whitish or reddish, and four feet high: the leaves stand alternately on long pedicles on it; they are like those of the root, but smaller, and very thick and fleshy: the flowers stand on the tops of the stalks, and on short branches rising from the alæ of the leaves. They are small, and naturally of a greenish white. Culture makes a vast variety in this plant; so that Tournefort has described no less than ten varieties of it, under the name of so many species.

It is a native of the sea-coasts of many parts of Europe, and, in this it's wild state, is described, as a distinct species, under the name of Beta sylvestris maritima, when cultivated C. Bauhine calls it, Beta rubra, and Beta alba. The variations culture makes in it are in size, and in the roundness or flatness of the stalk, and in the variation of the leaves, stalks, or ribs of the leaves, into red and yellow.

ULMUS.

ULMUS.

THE calyx is a turbinated, rugoſe perianthium, compoſed of a ſingle leaf, divided into five ſegments at the edge, erect, coloured on the inſide, and permanent: there is no corolla. The ſtamina are five ſubulated filaments, twice as long as the cup: the antheræ are erect, ſhort, and ſulcated four ways: the germen is orbicular and erect; the ſtyles are two, ſhorter than the ſtamina, and reflex; the ſtigmata are hoary. The fruit is a large, oval, compreſſed, drupe: the ſeed is ſingle, roundiſh, and lightly compreſſed.

1. *Ulmus fructu membranaceo.* The common Elm.
The membranaceous-fruited Elm.

This is a large, tall and ramoſe tree: the bark is rough, and full of cracks on the trunk, but on the young ſhoots ſmooth, and of a pale brown colour, and the under bark is mucilaginous and tough: the leaves are two inches long, nearly as much in breadth, ſerrated round the edges, and pointed at the ends: the flowers appear before the leaves; they are ſmall and purpliſh: the fruit is a large, oval-pointed, membranaceous drupe: the ſeed ſweet to the taſte.

It is common in our hedges. C. Bauhine calls it, Ulmus campeſtris et Theophraſti; Dodonæus, Ulmus. It's inner bark, boiled in water, makes an excellent mucilage, uſed in ſore throats, and in fevers.

The other ſpecies of Elm are, 1. The narrow-leaved Elm. 2. The broad, rough-leaved Elm; 3. and the broad and ſmooth-leaved Elm.

BOSEA.

THE calyx is a perianthium, compoſed of five hollowed, lanceolated, erect leaves, thinner at the edges than elſewhere; there is no corolla: the ſtamina are five ſubulated filaments, a little longer than the cup; the antheræ are ſimple; the germen is ovato-oblong, and cuſpidated: the ſtyles are two, and patulous: the ſtigmata are ſimple: the fruit is a globoſe, unilocular berry; the ſeed is ſingle and acuminated. This genus comes very near the Celtis and the Ulmus.

Of this there is but one known ſpecies. It is deſcribed by Ludwig, under the name of Yerva Mora. Theſe characters diſtinguiſh it ſufficiently.

CAESSA.

THE calyx is a perianthium, compoſed of five oblong, hollow leaves. The corolla conſiſts of a ſingle petal; the tube is ſhort, and the mouth expanded: the ſtamina are five ſubulated filaments, placed on the upper part of the tube of the corolla; the antheræ are ſimple: the germen is oval; the ſtyles are two, ſhort and expanded: the ſtigmata are thick; the fruit is a bivalve capſule; the ſeeds ſmall.

There is but one known ſpecies of this genus, which is ſufficiently diſtinguiſhed by theſe characters.

Claſs the Fifth Order the Second.
Diviſion the Third.

Pentandria Digynia, with many ſeeds ſucceeding each flower.

NAMA.

THE calyx is a permanent perianthium, compoſed of five oblong leaves: the corolla conſiſts of five petals: the ſtamina are five ſhort and ſlender filaments, of a ſubulated form; the antheræ are tumid and large; the germen is of an oval figure: the ſtyles are two; they are ſhort and ſlender: the fruit is a capſule of an oval figure, formed of two valves, and containing only a ſingle cell; the ſeeds are numerous, ſmall, and roundiſh.

Of this genus there is but one known ſpecies, which needs no farther deſcription.

MITREOLA.

MITREOLA.

THE calyx is a very ſmall, permanent perianthium, formed of one leaf, and divided into five ſegments: the corolla conſiſts of a ſingle, campanulated petal, divided at the extremity into five erect, acute ſegments: the ſtamina are five extreamly ſhort filaments, placed in the tube of the corolla; the antheræ are ſimple. The germen is divided into two parts, and oval: the ſtyles are two; they are erect, and of the length of the ſtamina; the ſtigmata are obtuſe: the fruit is an erect, ſimple capſule, divided into two parts, containing two cells, and of an ovated, acute figure, and ſplits between the lobes: the ſeeds are numerous, ſmall, and roundiſh.

It is an American, deſcribed by Houſton under the name of Mitra.

HEUCHERA.

THE calyx is a narrow, rounded perianthium, compoſed of a ſingle leaf, divided at the edge into five obtuſe ſegments: the corolla conſiſts of five petals, inſerted into the edge of the cup; they are of the length of the cup, and of an ovato-linear figure: the ſtamina are five erect, ſubulated filaments, of twice the length of the cup; the antheræ are roundiſh: the germen is roundiſh and ſemi-bifid: the ſtyles are two, ſtrait, and of the length of the ſtamina; the ſtigmata are obtuſe. The fruit is an ovato-acuminated capſule, ſemi-bifid, terminating in two reflex points, and containing two cells: the ſeeds are numerous and ſmall.

Heuchera foliis palmatis ſinuatis.
The Heuchera, with palmated and ſinuated leaves.

The root is oblong, whitiſh within, brown on the ſurface, and furniſhed with many fibres; the radical leaves are affixed to long pedicles; they are very large, palmated, ſinuated, and indented round the edges; of a bright green on the upper ſide, but paler underneath. The ſtalk grows but to five or ſix inches high: it has ſometimes no leaves, ſometimes one or two, like the radical ones, but much ſmaller; from the middle to the top of the ſtalk ſtand the flowers; they are of a duſky blackiſh purple, with an admixture of greeniſh, and appear hairy. They ſtand on long pedicles, and form a kind of lax ſpike.

It is a native of America, and of ſome parts of Europe; it grows in damp places. Boerhaave calls it, Mitella Americana flore ſquallide purpureo villoſo; Plukenet, Cortuſa Americana flore purpureo.

GENTIANA.

THE calyx is a perianthium, formed of a ſingle leaf, divided into five oblong, acute, permanent ſegments: the corolla conſiſts of a ſingle petal, tubulated, and imperforated at the baſe, and at the edge divided into five ſegments, various in figure. The ſtamina are five ſubulated filaments, ſhorter than the corolla; the antheræ are ſimple: the germen is oblong, cylindric, and of the length of the ſtamina; there are no ſtyles, but the ſtigmata are two, and oval. The fruit is an oblong, cylindric, acuminated capſule, ſlightly bifid at the top, formed of two valves, and containing only one cell: the ſeeds are numerous and ſmall; the receptacles are two, and grow to the two valves of the capſule.

This genus comprehends the Gentiana and Centaurium minus of authors. The figure of the fruit is conſtant; the flower varies greatly in the ſeveral ſpecies, both in the number, and figure of it's parts. One ſpecies excludes a fifth, another adds three fifths to the parts; in ſome the neck of the corolla is open, in others it is cloſed up with filaments; in ſome the laciniæ are ciliated, in others the limb is only plicated, in others ſtellated; in ſome campanulated, and in others infundibuliform: when it is ſtellated, there are often little ſegments placed between the others.

1. *Gentiana floribus lateralibus confertis, pedunculatis, corollis rotatis.* **Gentian.**

The Gentiana, with lateral, cluſtered, pedunculated, and rotated flowers.

This is the ſpecies of Gentian, the root of which is uſed in medicine. The root is of a yellowiſh brown, long, thick, and divided into ſeveral parts toward the bottom: the radical leaves ſtand in cluſters; they are ſix or eight inches long, and more than half their length in breadth, of a pale green, very rigid and nervous, the nerves running longitudinally, broadeſt in the middle, and pointed at the end. The ſtalk is ſmooth and thick; it grows to two or three feet high: the leaves ſtand in pairs at the joints; they are like the radical ones, but ſmaller, ſmooth, gloſſy, and have each either three or five ribs running longitudinally. The flowers ſtand in cluſters, verticillately as it were, ſurrounding the ſtalks; they are moderately large, and of a pale yellow.

The plant is a native of Germany and Sweden. C. Bauhine calls it, Gentiana major lutea; J. Bauhine, Gentiana major hellebori albi folio. It's root is an excellent ſtomachic in tincture or infuſion.

2. *Gentiana foliis linearibus, floribus terminatricibus raris, corollis erectis plicatis.* **Calathian Violet.**

The linear-leaved Gentian, with terminatory, plicated flowers.

The root is oblong, ſlender, yellow, and bitter: the ſtalk is round, ſlender, and grows to fifteen inches, or more, in height: the leaves are often two inches long, very narrow, and placed in pairs on the ſtalks; they are of a pale green, and have each three longitudinal ribs. The flowers ſtand at the top of the ſtalk, and of the branches, when there are any; they are very large, often an inch, or more, in length, and of a beautiful blue colour.

The plant is a native of England, but not common. I found it, two years ſince, in a marſh near Rocheſter. C. Bauhine calls it, Gentiana paluſtris anguſtifolia; others, Pneumonanthe.

3. *Gentiana corollis hypocrateri-formibus, fauce barbatis.* **Autumnal dwarf Gentian.**

The Gentiana, with hypocrateri-form flowers, barbated at the mouth.

The root is oblong, ſlender, and yellowiſh; the radical leaves are an inch long, and more than half an inch broad; they ſtand thirty or forty together in a circular manner: the ſtalk is firm, ſmooth, and a foot high: the leaves ſtand two at a joint: they have no pedicles, and are like the radical ones, but ſhorter, and have each three longitudinal ribs; they terminate in a point. The flowers ſtand on the top of the ſtalk, and on ſhort branches growing from the alæ of all the leaves; they are moderately large, and of a beautiful blue colour.

It is common in dry, hilly places. C. Bauhine calls it, Gentiana autumnalis ramoſa; Rudbeck, Gentianella; Ray, Gentianella autumnalis elatior foliis centaurii minoris.

4. *Gentiana foliis lineari-lanceolatis, caule dichotomo, corollis infundibuliformibus quinquifidis.* **Small Centaury.**

The lineari-lanceolate-leaved Gentian, with dichotomous ſtalks, and funnel-ſhaped flowers.

The root is long, ſlender, oblique, and woody; the radical leaves are an inch long, and not half an inch broad; the ſtalk riſes ſingle, but uſually divaricates afterwards into two, and theſe often into two again. The height of the plant is about ten inches: the leaves ſtand in pairs, and are like thoſe of the root, but narrower: the flow-

ers ſtand at the tops of the ſtalk in cluſters, and are long, narrow, and of a pale red. The whole plant is very bitter to the taſte.

It is common in dry paſtures. C. Bauhine and others calls it, Centaurium minus. It is an excellent ſtomachic in infuſion, and is a common ingredient in bitters.

The other principal ſpecies of Gentian are, 1. The narrow-leaved Gentian, with a blue and yellow flower. 2. The great, purple Gentian. 3. The ſwallow-wort-leaved Gentian. 4. The great-flowered, Alpine Gentian. 5. The little ſpring Gentian. 6. The narrow-leaved, ſpring Gentian. 7. The cruciate-leaved Gentian. 8. The broad, ſhort-flowered Gentian. 9. The Gentian called ſmall Centaury, with very narrow, linear leaves. 10. The ſhort, acute-leaved Gentian. 11. The cluſter-flowered, toad-flax-leaved Gentian. 12. The red, ſpiked-flowered Gentian. 13. The great, red-flowered, ſweet Gentian, of the Cape of Good Hope. 14. The perfoliate, yellow-flowered Gentian. 15. The little, trifoliate, yellow Gentian. 16. The narrow and rigid-leaved, little, yellow Gentian.

SWERTIA.

THE calyx is a plane, permanent perianthium, formed of one leaf, divided into five lanceolated ſegments. The corolla conſiſts of a ſingle petal: there is no tube; the limb is plane, and divided into five lanceolated ſegments, larger than the cup, and cohering only at their ungues. The nectaria are ten; they are two points at the bottom of every ſegment, depreſſed, and ciliated with fine hairs: the ſtamina are five, erecto-patent, ſubulated filaments, ſhorter than the corolla; the antheræ are incumbent: the germen is of an ovato-oblong figure; the ſtyle is not viſible: the ſtigma is ſimple: the fruit is a cylindric capſule, pointed at each end, formed of two valves, and containing only one cell: the ſeeds are numerous and ſmall. Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

Claſs the Fifth. Order the Second.

Diviſion the Fourth.

Pentandria Digynia, with two naked ſeeds after every flower, and with ſimple umbels.

PHYLLIS.

THE calyx is an extreamly minute perianthium, compoſed of two leaves, and fixed on the germen: the corolla conſiſts of five lanceolate, obtuſe petals, turned backwards, and juſt joining at their baſes: the ſtamina are five capillary, flaccid filaments, ſhorter than the corolla: the antheræ are ſimple and oblong: the germen is placed under the receptacle; there is no ſtyle: the ſtigmata are two, pubeſcent, reflex, and ſubulated: the fruit is of a turbinato-oblong, obtuſe, angular figure, compoſed of two parallel ſeeds, broadeſt at top, convex and angular on one ſide, and plain on the other.

This genus comprehends the Beupleuroides of Boerhaave; the Simpla Nobla of Plukenet. The characters are ſufficient, without a farther deſcription.

PANAX.

THE umbel of the Panax is ſimple, equal, and thick; the involucrum is very ſmall, formed of a number of leaves, ſubulated and permanent. The perianthium of each flower is very ſmall, divided into five ſegments, and permanent: the general corolla is uniform; the peculiar corolla conſiſts of five oblong, crooked, equal petals: the ſtamina are five very ſhort filaments; the antheræ are ſimple; the germen is roundiſh, and placed below the perianthium: the ſtyles are two, and ſmall; the ſtigmata are ſimple: the fruit is a roundiſh berry, having one cell, and is coronated with the cup: the ſeeds are two, and of a kidney-like ſhape.

This genus comprehends the famous Ginſeng, the Araliaſtrum, and Aureliana of authors.

The

The ſimilarity of the names Ginſeng and Ninzin, or Ninſi, and the ſimilar virtues of the two roots, have led people to imagine they were the ſame, but that very erroneouſly; they are not even of the ſame genus. The Ginſeng is a Panax; the Ninzin a Suim, hereafter to be deſcribed in it's place.

Panax foliis quinis.
The five-leaved Panax. **Ginſeng.**

The root is two or three inches long, and of the thickneſs of a man's little finger, ſomewhat rugoſe on the ſurface, and uſually divided into two, ſometimes into more, parts at the baſe. It is of a browniſh colour on the ſurface, and yellowiſh within; it's ſmell is aromatic and agreeable; it's taſte acrid, aromatic, and bitteriſh: at the head of the root ſtand a ſeries of nodules, formed by the remains of the ſtalks of the years before, and by theſe the age of the root is diſcovered. The ſtalk is ſingle, ſmooth, of a reddiſh colour, and a foot high. From the top of this there grow three or four oblong pedicles, furrowed longitudinally, half way of their length, and ſtanding horizontally, ſo as to form a kind of umbel. At the extremity of each of theſe ſtand five leaves, unequal in ſize, and growing together, with petioles of an unequal length; they are thin, oblong, of an ovato-acuminated figure, and deeply ſerrated round the edges; they are of a pale yellowiſh-green colour, and full of fine veins: from the top of the main ſtalk, and in the center of the pedicles ſupporting the leaves, there riſes a peduncle naked, ſlender, and five or ſix inches long; at the top of this ſtands a corymboſe umbel, formed of flowers ſtanding on peduncles, very ſlender, and an inch in length; every flower has it's ſeparate peduncle, and they are ſmall, and their petals oblong. The berry, which ſucceeds each of theſe flowers, is ſtriated on the ſurface.

It is a native of China and Tartary; it grows in ſhady places, in foreſts, &c. between thirty-nine and forty-ſeven degrees North; it has lately been diſcovered alſo about the forty-ſeventh degree in North America. Sarraſin calls it, Araliaſtrum quinquefolii folio. The Tartars and Chineſe gather the roots in ſpring and autumn, with great care, and dry them in a particular manner with a great many cautions; when dried, it ſells with them for three times it's weight in ſilver, and is eſteemed an univerſal medicine, a remedy for all diſeaſes; it's moſt favourite quality, however, is that of a provocative to venery, which they imagine it poſſeſſes in an amazing degree. With us it has been ſold at a much greater price than there; and ſuch cheats have been the Chineſe, who ſold it, that, when cut, every root of it has often been found loaded with a long piece of lead, carefully let into it, which has given it three times it's real weight.

ERYNGIUM.

THE common receptacle is conic, and there are paleæ which ſeparate the ſeſſile floſcules. The involucrum of the receptacle is formed of ſeveral leaves, plane, and exceeding the floſcules in height: the proper perianthium is formed of five leaves, erect, acute, placed upon the germen, and exceeding the corolla in length: the corolla is, in the whole, roundiſh and uniform; the ſingle flower is formed of five oblong petals, with their extremities turned back to their baſe. The ſtamina are five ſtrait, capillary filaments, taller than the corolla: the antheræ are oblong; the germen is hairy, and ſtands under the proper perianthium: the ſtyles are two, filiform, ſtrait, and of the length of the ſtamina; the ſtigmata are ſimple: the pericarpium is an oval fruit, diviſible into two parts; and the ſeeds oblong and cylindric: in ſome the ſeeds are in time freed from the cruſt of the pericarpium, in others not.

1. *Eryngium foliis radicalibus ſubrotundis plicatis ſpinoſis, floribus pedunculatis.*
The Eryngium, with the radical leaves, roundiſh, plicated, and prickly, and the flowers on peduncles. **Sea Eryngo.**

The root is very long, of the thickneſs of a ſmall quill, and diſperſed every way in the earth: the radical leaves ſtand on long pedicles; they are ſix or eight inches long, and

and three or four broad, ſinuated at the edges, but not very deeply, and folded, as it were, very prickly at the edges, and of a pale whitiſh blue green. The ſtalk is round, thick, tough, very much branched, and of a bluiſh-green: the leaves on it are like the radical ones, but ſmall: the flowers ſtand at the tops of the branches, in round cluſters, ſurrounded by prickly leaves; they are ſmall and whitiſh.

It is common on our ſea-coaſts. C. Bauhine calls it, Eryngium maritimum.

2. *Eryngium foliis ſpinoſis laciniatis, caulibus ramoſiſſimis.*
The prickly, laciniated-leaved Eryngium, with very much branched ſtalks. **Common Eryngo.**

The root is a foot long, and as thick as a man's finger; the radical leaves are ſix or eight inches long, and deeply laciniated, even down almoſt to the middle rib, in many places, and divided, as it were, into ſo many lobes; they are ſerrated at the edges, and the denticles all terminate in very ſharp prickles: the ſtalk is ſtriated round, and tough; it grows to two feet high, and ſpreads ſo much into branches every way, that the whole plant frequently aſſumes a globular figure. The leaves ſtand alternately; they reſemble the radical ones, and are of a bluiſh-green colour: the flowers ſtand in round cluſters at the tops of the ſtalks, and are ſmall and white.

It is frequent in corn-fields in moſt part of Europe; but in England we have it only in three or four places, as in Northamptonſhire and Devonſhire. C. Bauhine calls it, Eryngium vulgare; others, Eryngium campeſtre. It's root is a deobſtruent and pectoral; it is candied with ſugar, and dried for uſe in decoctions, &c.

3. *Eryngium foliis radicalibus ovalibus planis crenatis, capitulis pedunculatis.*
The oval, plane-leaved Eryngium, with pedunculated heads. **Small Eryngo.**

The root is very long; the radical leaves are two inches long, an inch broad, rounded at the end, and narrower to the baſe; the ſtalk grows to ſeven inches high, and is very ramoſe: the flowers are ſmall and white.

It is a native of Ruſſia. C. Bauhine calls it, Eryngium planum minus.

The other ſpecies to be mentioned are, 1. The teaſel-headed, Alpine Eryngium. 2. The blue, mountain Eryngium. 3. The dwarf, ſpinoſe, ſinuated Eryngium. 4. The pſyllium-leaved Eryngium. 5. The ſtinking, American Eryngium. 6. The corniculate, Portugal Eryngium. 7. The multifid-leaved, Cretic Eryngium. 8. The little-headed, Cretic Eryngium. 9. The ſtellate Eryngium, with deeply divided, pale green leaves. 10. The tall, broader-leaved, ſtellate-headed Eryngium.

HYDROCOTYLE.

THE general umbel is compoſed of four ſeſſile flowers, and a ſingle umbel in the center; the partial umbel conſiſts of four ſeſſile floſcules. The general involucrum is compoſed of four leaves, and the partial involucrum of four leaves alſo; there is ſcarce any viſible perianthium: the univerſal corolla is uniform in figure, though not in ſituation; the ſingle corolla is formed of five ovato-acute, patent petals: the ſtamina are five ſubulated filaments, ſhorter than the corolla: the antheræ are very ſmall; the germen is erect, compreſſed, and orbiculated, and ſtands under the proper receptacle: the ſtyles are two, ſubulated and very ſhort; the ſtigmata are ſimple: the fruit is orbicular, erect, and is compoſed of two compreſſed and ſemi-orbicular ſeeds.

1. *Hydrocotyle foliis peltatis orbiculatis undique emarginatis.*
The orbiculated, peltated, and every way emarginated-leaved Hydrocotyle. **Marſh Pennywort.**

The root is oblong, ſlender, and creeping; the ſtalks are procumbent, and take root at every joint, ſending down cluſters of long fibres; they never riſe at all from the

the earth; they are round and jointed; at an inch, or more, diſtance from every joint, there riſe three or four pedicles, of three inches, or more, in height; at the top of each ſtands a ſingle leaf, round and ſinuated, or emarginated all round the edges; it is about an inch in diameter, of a pale green colour, and the pedicle is inſerted into the center of it. From the ſame ſtalks, near the baſe of the pedicles of the leaves, there riſe other pedicles, of half an inch long, which ſuſtain the flowers, theſe are of a pale reddiſh colour, and very ſmall.

The plant is common with us in damp places, and is ſuſpected of hurting ſheep that eat of it, whence it's Engliſh name *White Rot*. J. Bauhine calls it, Cotyledon aquatica.

2. *Hydrocotyle foliis orbiculatis integerrimis, floribus minimis.*
The orbiculate, whole-leaved Hydrocotyle, with very ſmall flowers.

The ſtalks creep on the ground, and take root at every joint; they are round, purple, and of two feet in length: the leaves are perfectly round, two inches and a half in diameter, even at the edges, of a deep green, and ſtand on pedicles of about two inches high, which are inſerted into their center. The flowers are ſmaller than in the former ſpecies, and of a ſnow white.

It is frequent in the Savannahs of North America. Plumier calls it, Hydrocotyle folio umbilicato maximo.

The other ſpecies are, 1. The Aſarum-leaved Hydrocotyle, called Aſarina minor. 2. The nymphæa-leaved Hydrocotyle.

Claſs the Fifth. Order the Firſt.

Diviſion the Fifth.

Pentandria Digynia, with two naked ſeeds, and with an univerſal and a partial umbel.

SANICULA.

THE general umbel is formed of a very few radii, uſually but four; the partial umbel of very numerous and thick-ſet ones. The general involucrum is dimidiated, and placed outwardly; the partial one ſurrounds the whole, and is ſhorter than the floſcules: the perianthium is ſcarce viſible; the general corolla is uniform; the ſingle corolla conſiſts of five compreſſed, inflex, bifid petals: the ſtamina are five ſimple, erect filaments, twice as long as the floſcules: the antheræ are roundiſh; the germen is rough, and placed under the proper receptacle: the ſtyles are two, ſubulated and reflex; the ſtigmata are acute: the fruit is oval and acute, rough and diviſible into two parts: the ſeeds are two, convex and rough on one ſide, and ſmooth and plane on the other.

1. *Sanicula foliis radicalibus ſimplicibus, floſculis omnibus ſeſſilibus.*
The Sanicula, with the radical leaves ſimple, and all the flowers ſeſſile. Sanicle.

The root is compoſed of a number of thick fibres, black on the outſide, and white within; the radical leaves ſtand on long pedicles, and are of a roundiſh figure, but ſinuated in five places, and indented all round the edges; they are of a dark green, of a gloſſy ſurface, and thick. The ſtalk is round, ſmooth, and a foot high; it has often but one leaf on it, ſometimes two, and at it's top has a ſmall umbel; the flowers are moderately large and white, or of a pale fleſh colour.

It is common in our woods. C. Bauhine calls it, Sanicula officinarum; J. Bauhine, Sanicula ſive diapenſia. It is eſteemed an excellent vulnerary.

2. Sanicula foliis ſeptilobatis inequalibus, floſculis maſculis pedunculatis.
The Sanicle, with unequal ſeptilobate leaves, and with the male flowers placed on pedicles.

The root is black, ſhort, and furniſhed with a multitude of fibres: the radical leaves are placed on long, ſhining pedicles; they are an inch, or more, in breadth, of a figure approaching, in general, to roundneſs, but divided into ſeven lobes, by ſo many deep ſinuations, and theſe lobes ſerrated at the edges. The ſtalk is round, of a purpliſh brown, and gloſſy; it divides toward the top into two parts, and theſe again into two others: the leaves ſtand two together; at the diviſions of the ſtalks they are like the radical ones, but divided only into three lobes: the umbels are ſmall, and conſiſt partly of hermaphrodite flowers, partly of ſuch as are only male; the former are ſeſſile, the others have pedicles.

It is a native of Virginia. Ray calls it, Sanicula caule et ramis dichotomis echinis minimis in eodem pediculo; Grovonius and Van Royen, Sanicula floſculis maſculis pedunculatis hermaphroditis ſeſſilibus.

ASTRANTIA.

THE general umbel is compoſed of a very few rays, uſually only of three; the partial umbel of very numerous ones: the general involucrum is formed of leaves duplicate to the rays; the partial one of about twenty leaves, of a lanceolated figure, patent, equal, coloured, and longer than the umbels: the proper perianthium is divided into five ſegments, acute, erect, and permanent: the univerſal corolla is uniform; the ſingle flower is compoſed of five bifid petals: the ſtamina are five ſimple filaments, of the length of the floſcule; the antheræ are ſimple: the germen is oblong; the ſtyles are two, erect and uniform; the ſtigmata are ſimple and patent: the fruit is oval, obtuſe, coronated, and ſtriated; it is ſeparable into two parts: the ſeeds are two, oval and oblong, and covered with the cruſt of the pericarpium. The marginal flowers of the umbel are only males; the reſt are hermaphrodite.

Of this genus there is only one known ſpecies.

ASTRANTIA. Black Maſterwort.

The root is ſhort and tuberous, and is furniſhed with a multitude of large fibres, black on the outſide, and white within. The radical leaves are divided uſually into five lobes, which are oblong, broad, pointed at the ends, and ſerrated round the edges, of a dark green on the upper ſide, paler underneath, and placed on long pedicles: the ſtalk is round, ſtriated, and two feet high; the leaves on it ſtand ſingly, and are like the radical ones; the flowers ſtand in roundiſh cluſters at the tops of the ſtalks, and are ſmall, and of a greeniſh white: the ſurrounding leaves of the involucrum are often variegated with whitiſh, greeniſh, and purpliſh.

It is a native of Italy and Germany; we have it in gardens. Lobel calls it, Aſtrantia nigra; C. Bauhine, Helleborus niger ſaniculæ folio major. Moriſon has deſcribed a ſmaller kind, under the name of Aſtrantia minor; and C. Bauhine, under that of Helleborus ſaniculæ folio minor; but, brought into a garden, it grows to the ſame ſize, and is wholly the ſame with the common one. Tournefort has alſo made another ſpecies, from a whiter colour of the flowers. The root is ſaid to be aperient, and good in diſorders of the viſcera; but it is not in uſe at this time.

BUPLEURUM.

THE general umbel is compoſed of radii, under ten in number; the partial umbel is erecto-patent: there is no general involucrum. The partial involucrum is compoſed of five leaves, much longer than the umbel itſelf; they are of an oval figure, acute and patent: the proper perianthium is ſcarce viſible; the general corolla is uniform; the ſingle flower conſiſts of five inflexo-cordated, ſmall petals; the ſtamina are five ſimple filaments; the antheræ are roundiſh: the germen is placed below the proper receptacle: the ſtyles are two, reflex and ſmall; the ſtigmata are very little; the

the fruit is roundiſh, compreſſed, ſtriated, and divided into two parts: the ſeeds are two, of an oval oblong figure, convex and ſtriated on one ſide, and plane on the other.

The leaves of the plant ſometimes ſtand at the baſe of the general umbel, in ſuch a manner, that it will be eaſy for an incurious obſerver to take them for a general involucrum.

1. *Bupleurum foliis ovatis amplexicaulibus, umbellis majuſculis.* Thorough-wax.

The oval-leaved, perfoliate Bupleurum, with moderately large umbels.

The root is oblong, ſlender, whitiſh, and woody: the ſtalk riſes ſingle, and is round, ſmooth, hollow, and two feet, or more, in height: the leaves ſtand ſingly, at conſiderable diſtances; they are of an oval figure, very ſmooth and gloſſy, of a bluiſh-green colour, and ſurround the ſtalk in ſuch a manner, that it ſeems to perforate or grow through the middle of their baſe: toward the top the ſtalk divides into ſeveral ramifications, and at the tops of theſe, and of the branches propagated from them, ſtand moderately large umbels, an inch and a half in diameter at the top. The flowers are yellowiſh and ſmall, the ſeeds large and blackiſh.

The plant is common in the weſt of England, in corn-fields. C. Bauhine calls it, Perfoliata arvenſis.

2. *Bupleurum foliis anguſtiſſimis, umbellis minimis.*

The Bupleurum, with very narrow leaves, and very ſmall umbels.

The root is oblong, ſlender, and woody; the radical leaves are ſix inches long, not more than a ſixth of an inch broad, and very much reſemble thoſe of the graſſes: the ſtalk is round, green, branched, ſmooth, jointed, and grows to a foot and a half high; the leaves ſtand two together, at the diviſions of the ſtalks, and are two or three inches long, very narrow, and graſſy, and of a ſtrong green: toward the top the ſtalk divides into ſeveral branches, and theſe, at their tops, have very ſmall umbels, ſcarce diſtinguiſhable as ſuch: the flowers are yellowiſh, and very minute.

It is a native of England; I have found it about Thorndon in Eſſex in abundance. Ray calls it, Bupleurum minimum; C. Bauhine, Bupleurum anguſtiſſimo folio; J. Bauhine, Auricula leporis minima.

The other ſpecies to be mentioned are, 1. The broad, rigid-leaved Bupleurum. 2. The narrow-leaved, ſmall, thick-ſtalked Bupleurum. 3. The long-leaved, perfoliate Bupleurum. 4. The ſmall-flowered, Alpine Bupleurum. 5. The graſſy-leaved, Pyrenæan Bupleurum. 6. The willow-leaved and ſhrubby Bupleurum. 7. The graſſy-leaved, ſhrubby Bupleurum. 8. The long-ſeeded, oriental Bupleurum, with narrow leaves.

ECHINOPHORA.

THE general umbel is multiple and unequal; the partial one is alſo multiple and unequal: the general involucrum is of a turbinated figure; it is formed of a ſingle leaf, and ſerves as a vagina for the ſeeds.

This is the eſſential character of the genus, and is ſo ſtriking and obvious a one, that no farther deſcription is neceſſary: the characters in general, excepting for this peculiar circumſtance of the general involucrum, agree with thoſe of the tordylium.

TORDYLIUM.

THE general umbel is unequal and multiple: the partial umbel is alſo unequal, multiple, very ſhort, and plane: the general involucrum is compoſed of narrow leaves, often of the length of the umbel: the partial involucrum is dimidiated, and is longer than the umbellule: the general corolla is difform and radiated: the ſingle flowers of the diſk are compoſed of five equal, inflexo-cordated petals: the ſingle flowers of the radius are like theſe, but that the outer petal is larger than the reſt, and is divided into

into two parts: the ſtamina are five capillary filaments in all: the antheræ are ſimple; the germen in all is roundiſh, and placed under the proper receptacle: the ſtyles are two, and ſmall: the ſtigmata are obtuſe. The fruit is roundiſh, compreſſed, and ſurrounded longitudinally with denticles; it is ſeparable into two parts: the ſeeds are two; they are roundiſh, almoſt plane, but with an elevated, denticulated edge.

1. *Tordylium umbella conferta, foliolis ovato-lanceolatis pinnatifidis.* Hedge Parſley.

The Tordylium, with cluſtered umbels, and with pinnatifid, ovato-lanceolate leaves.

The root is oblong, ſlender, and white; the radical leaves ſtand on long pedicles, and are five or ſix inches long, and formed of a number of lobes, reſembling pinnæ, diſpoſed on the two ſides of a middle rib, which is terminated at the extremity by a lobe of the ſame kind, only longer; they are all ſerrated round the edges, rough to the touch, and of a duſky green colour. The ſtalk is round, ſtriated, hairy, and rough to the touch; the leaves on it are like the radical ones, but ſmaller; it grows to three feet high, and, toward the top, divides into a number of branches, on the tops of which ſtand moderately large umbels of flowers, of a reddiſh colour.

It is common by our way-ſides and in hedges. C. Bauhine calls it, Caucalis ſemine aſpero floſculis rubentibus; others, Caucalis minor flore rubente.

2. *Tordylium involucris umbella longioribus.*

The Tordylium, with the involucra longer than the umbels.

The root is oblong, thick, and woody. The radical leaves are large, and compoſed of numbers of oblong and broad pinnæ, ſet on the ſides of the middle ribs, with ſmall lobes at their extremities; they are of a yellowiſh-green colour, and ſmooth ſurface. The ſtalk is round, ſtriated, jointed, and has leaves like the radical ones, but ſmaller, and placed ſingly at every joint. The top of the ſtalk is divided into ſix or eight branches, and, on the tops of theſe, ſtand umbels of a moderate ſize, compoſed of flowers of a white, or pale reddiſh, colour. The ſeeds are large and long.

It is a native of Syria, but we have it in ſome of our gardens. C. Bauhine calls it, Gingidium foliis paſtinachæ latifoliæ; J. Bauhine, Caucalis Syriaca cum maximo ſemine.

3. *Tordylium involucris partialibus longitudine petalorum, foliis ovatis laciniatis.* Candy Hartwort.

The oval, laciniated-leaved Tordylium, with the partial involucra of the length of the petals.

The root is long, ſlender, and white. The radical leaves ſtand on pedicles of four or five inches long; they are compoſed of ſeveral pairs of pinnæ, of an oval figure, deeply ſerrated at the edges, of a pale green colour, and ſomewhat hairy. The ſtalk is round, ſtriated, and hairy; it grows to about fifteen inches high, and, toward the top, divides into ſeveral branches. The leaves ſtand ſingly on the ſtalk, and are like the radical ones, but ſmaller, and ſomewhat more hairy, though not much ſo. The umbels are ſmall, the flowers white, the ſeed not very hairy.

It is a native of Italy, and other parts of Europe. Dodonæus calls it, Seſeli Creticum; C. Bauhine, Seſeli Creticum minus.

The ſeeds are eſteemed a carminative and alexipharmic, but are very little uſed at preſent.

CAUCALIS.

THE general umbel is unequal, and formed of a few radii, uſually not more than three: the partial umbel is alſo unequal, but it has more radii, the five outer ones being larger than the reſt: the general involucrum is compoſed of as many leaves as there are radii; they are of a lanceolato-acute figure, and have ſhort, oval, lateral membranes: the partial involucrum is compoſed of leaves of the ſame ſhape, longer than

than the radii, and uſually five in number: the general corolla is difform and radiated: the ſingle flowers of the diſk are all males; they are ſmall, and compoſed of five equal, inflexo-cordate petals; thoſe of the radius are all hermaphrodites, and are compoſed of five inflexo-cordate, unequal petals, the exterior one being larger than the reſt, and bifid; they have all five capillary filaments, with ſmall antheræ: the flowers of the radius have the germen oblong, ſcabrous, and placed below the cup: the ſtyles are two, and ſubulated: the ſtigmata are two, patent and obtuſe. The fruit is of an ovato-oblong figure, ſtriated longitudinally, and the ridges are beſet with little ſpines: the ſeeds are two, oblong, convex, and prickly on one ſide, and plane and ſmooth on the other.

1. *Caucalis involucro univerſali pinnatifido, partialibus indiviſis, umbella multifida.*

The Caucalis, with the univerſal involucrum pinnatifid, the partial ones undivided, and with a multifid umbel.

The root is white, oblong, ſlender, and of an aromatic taſte, but eſculent. The radical leaves ſtand on long pedicles, and are very finely divided; they reſemble, in ſome meaſure, the leaves of the common carrot. The ſtalk is a foot, or more, high, ſtriated, jointed, and ramoſe, even from the bottom. The leaves ſtand ſingly at the joints, and are like the radical ones; they are ſmaller, however, and yet the ſegments are broader. The umbels ſtand on very long, naked pedicles, and are moderately large; the flowers are larger than in moſt other umbelliferous plants, and white.

It is common among the corn in moſt parts of Europe, C. Bauhine calls it, Caucalis arvenſis echinata magno flore.

2. *Caucalis umbella trifida, umbellulis triſpermis, involucris triphyllis.*

The Caucalis, with a trifid umbel, triſpermous umbellulæ, and three-leaved involucra.

The root is ſmall, oblong, and white: the radical leaves are finely divided, but the ſegments ſomewhat broad, ſmooth on the upper ſurface, a little hairy underneath, and placed on ſhort pedicles. The ſtalk is round, ſtriated, ramoſe, and ſmooth: the leaves ſtand ſingly on it, and are like the radical ones, only that the ſegments are broader. The umbels ſtand on naked, very long pedicles: the involucrum is compoſed of three large leaves, with a white edge. The ſeeds are oval, compreſſed, and of the bigneſs of a man's nail, and beſet with a multitude of rigid, purple ſpines.

It is a native of many parts of Europe, and grows principally in corn-fields. C. Bauhine calls it, Caucalis Monſpeliaca echinato magno fructu.

3. *Caucalis umbellulis ſeſſilibus ſimplicibus.*

The Caucalis, with ſimple, ſeſſile umbels.

The root is ſmall, oblong, and white: the ſtalks are round, very rough, procumbent, or oblique, and the leaves divided into a number of ſegments, rough, and of a duſky green: the umbels ſtand at the joints, without any pedicles. The flowers are ſingle and white; the ſeeds ſmall, but very rough and hairy.

It is common under hedges, and in corn-fields. C. Bauhine calls it, Caucalis nodoſa echinato ſemine; Rivinus, Caucalis ad alas florens.

The other ſpecies are, 1. The ſmall-flowered, fine-leaved Caucalis. 2. The broad-leaved, red-flowered Caucalis. 3. The dwarf, maritime Caucalis. 4. The great, downy-leaved Caucalis. 5. The ſpignel-leaved Caucalis. 6. The very finely-divided leaved Caucalis, with a large, echinated fruit.

ARTEDIA.

THE general umbel is multiple, plane, and patent: the partial umbel is ſmall, but ſimilar: the general involucrum is compoſed of about ten leaves; they are of an oblong, oval figure, nearly of the length of the umbel, and have three ſpines, or ſetæ, at their extremities: the partial involucrum is compoſed of two or three leaves,

and turns outward: the leaves are linear, pinnated, and longer than the umbellula: the general corolla is difform and radiated: the ſingle flowers of the diſk are all males; they conſiſt each of five erect, inflexo-cordate petals: the ſingle flowers of the radius are all hermaphrodites; they conſiſt of the ſame number of petals, but in theſe the exterior one is larger than the reſt, and divided into two parts: the ſtamina in all are five capillary filaments: the antheræ are ſimple and roundiſh: the flowers of the radius have the germen ſmall, and placed under the cup: the ſtyles are two, and reflex: the ſtigmata are ſimple. The fruit is roundiſh, compreſſed, diviſible into two parts, and foliaceo-ſquammoſe at the edge: the ſeeds are two, oblong, and elegantly ridged at the edges, with round ſquammæ.

Of this genus there is only one known ſpecies.

ARTEDIA.

The root is ſmall, oblong, and white: the radical leaves are finely divided, and of a dark green colour; they ſtand on moderately long pedicles, and ſomewhat reſemble the lower leaves of dill; they are of a bitter and diſagreeable taſte. The ſtalks are round, ſtriated, and two feet high: the leaves ſtand ſingly on them, and are like the radical ones, only ſmaller. The umbels are ſmall; the flowers white, with a tinge of bluiſh. The ſeeds are large and beautiful, and ſtand very cloſe in the head.

It is a native of the eaſtern parts of the world; Rawwolf found it about Mount Lebanon, and elſewhere; he calls it Gingidium; C. Bauhine, Gingidium folio fœniculi; and Tournefort, Thapſia orientalis anethi folio ſemine eleganter crenato.

DAUCUS.

THE general umbel is multiple, plane when in flower, but, when in ſeed, concave and connivent: the partial umbel is multiple, and like it: the general involucrum is of the length of the umbel, and is compoſed of ſeveral leaves; theſe are linear and pinnatifid: the partial involucrum is more ſimple, and of the length of the umbellula: the proper perianthium is ſcarce viſible: the general corolla is unequal: the ſingle flowers conſiſt each of five inflexo-cordate petals, the exterior ones larger than the reſt: the ſtamina are five capillary filaments: the antheræ are ſimple: the germen is placed under the proper receptacle, and is ſmall: the ſtyles are two, reflex: the ſtigmata are obtuſe. The fruit is of an oval figure, every way covered with rigid hairs, and is diviſible into two parts: the ſeeds are two, of a ſuboval figure, convex and hairy on one ſide, ſmooth and plane on the other.

Of this genus there is only one known ſpecies.

DAUCUS. Carrots.

The root is oblong, thick, and of an agreeable taſte: the radical leaves ſtand on long pedicles; they are very finely divided, large, and of a duſky green colour, and hairy on the under ſide. The ſtalk is round, ſtriated, and jointed; it grows to three feet high, and is, toward the top, divided into many branches: the leaves ſtand ſingly at the joints, and are like the radical ones, only ſmaller. The umbels ſtand at the tops of all the branches; they are moderately large, very thick ſet with flowers, and have a purpliſh tinge before they open, but, when opened, they are white. The umbel of the ſeeds is large and hollow; the ſeeds themſelves beautifully armed with pale, whitiſh prickles.

It grows with us by way-ſides very common. Cluſius calls it, Daucus vulgaris; C. Bauhine, Paſtinacha tenuifolia feminibus hiſpidis; Van Royen, Linnæus, and Haller, Daucus feminibus hiſpidis; but the addition of the two laſt words is unneceſſary, as the having hiſpid ſeeds is a part of the generical character.

The difference culture is able to produce in plants we have a very eminent inſtance of in this: our carrots, the red, the yellow, and the whitiſh kinds, which Tournefort has deſcribed as ſo many ſpecies, all are the ſame plant, all the common wild Daucus, meliorated by culture. It's other accidental varieties have alſo been treated in the ſame way by authors, and the number of ſpecies is thus ſwelled to no leſs than ten, though truly and originally but one and the ſame plant.

AMMI.

THE general umbel is multiple, conſiſting of fifty radii: the partial umbel is ſhort, and thick ſet with flowers: the general involucrum is compoſed of a number of linear, punctato-acute leaves, ſcarce ſo long as the umbel: the partial involucrum is formed of a number of linear, acute, ſimple leaves, ſhorter than the umbel: the proper perianthium is ſcarce viſible; the general corolla is difform: the ſingle flowers are formed each of five inflexo-cordate petals, unequal in ſize in the radius, but equal in the diſk: the ſtamina are five capillary filaments; the antheræ are roundiſh: the germen ſtands below the receptacle: the ſtyles are two, and reflex; the ſtigmata are obtuſe: there is no pericarpium: the fruit is round, ſmall, ſtriated, and diviſible into two parts; the ſeeds are two, convex and ſtriated on one ſide.

This genus comprehends the Ammi of authors, and the Ammoides of Boerhaave.

1. *Ammi foliis inferioribus pinnatis lanceolatis ſerratis, ſuperioribus multifidis linearibus.* **Common Biſhop's-Weed.**

The Ammi, with the lower leaves lanceolate and ſerrated, the upper ones multifid and linear.

The root is oblong, ſlender, and whitiſh: the radical leaves are placed on long pedicles, and are divided into a multitude of oblong, broad, crenated, and multifid ſegments: the ſtalk is round, ſtriated, and two or three feet high; the leaves on it ſtand ſingly, and are divided into more numerous, and thoſe much narrower and finer, ſegments, multifid, and of a dark green. The umbels ſtand on the tops of the branches; they are very large, the flowers white.

It is common wild in the vineyards of Spain and Italy; we have it in gardens. C. Bauhine calls it, Ammi majus; Dodonæus, Ammi vulgare; Linnæus, &c. Ammi laciniis foliorum caulis laciniatis.

The ſeeds of this are uſed in the ſhops as ſemina ammeos, but improperly; the next ſpecies is the true officinal kind.

2. *Ammi foliis inferioribus pinnatis linearibus ſerratis, ſuperioribus in ſegmenta anguſtiſſima diviſis.* **True Biſhop's Weed.**

The Ammi, with the lower leaves pinnated, linear, and ſerrated, the upper ones very finely divided.

The root is ſmall, oblong, and white; hard, but of an agreeable taſte, like that of a parſnep. The radical leaves ſtand on long pedicles; they are large, but the pinnæ are oblong, narrow, linear, and ſerrated all the way round. The ſtalk is round, ſtriated, jointed, and about a foot high; the leaves on it ſtand ſingly, and are finely divided, like thoſe of fennel. The umbels ſtand on the tops of the branches; they are ſmall, and the flowers white. The ſeed is very ſlender, and of a very aromatic ſmell, and acrid taſte.

It is a native of Italy; we have it in our gardens. C. Bauhine calls it, Ammi parvum foliis fœniculi; Boerhaave, Ammoides majus odore origani.

It's ſeeds are uſed in the ſhops as a carminative, and are ingredients in many compoſitions.

3. *Ammi foliis omnibus pinnatis linearibus anguſtioribus.* **Narrow-leaved Biſhop's-Weed.**

The Ammi, with all the leaves pinnated, linear, and very narrow.

The root is ſmall, oblong, white, and hard: the radical leaves are narrow, pinnated, and of a dark green; the pinnæ are very narrow, oblong, and deeply ſerrated. The ſtalk is round, ſmooth, branched at the top, and about ſix or eight inches high: the leaves on it ſtand ſingly; they are ſmall, finely divided, and of a duſky green. The umbels are very ſmall; the flowers little and white.

It

It is a native of Spain; it grows only on barren, hilly places. C. Bauhine calls it, Ammoides; Cæſalpinus, Ammi puſillum.

BUNIUM.

THE general umbel is multiple, but has fewer than twenty radii: the partial umbel is very ſhort, but thick ſet: the general involucrum is formed of many leaves, linear and ſhort; the partial involucrum is ſimilar, but of the length of the umbel: the proper perianthium is ſcarce viſible: the general corolla is uniform. The ſingle flowers conſiſt of each five inflexo-cordate petals, equal in ſize: the ſtamina are five ſimple filaments, ſhorter than the flower: the antheræ are ſimple; the germen is oblong, and ſtands below the proper cup: the ſtyles are two, and reflex; the ſtigmata are obtuſe: there is no pericarpium: the fruit is oval, and diviſible into two parts: the ſeeds are two, and oval, convex on one ſide, and plane on the other.

This genus comprehends the Bulbocaſtacum of Tournefort.

1. *Bunium foliis inferioribus pinnatis, pinnis lineari-lanceolatis.* **Common Earth Nut.**

The Bunium, with the lower leaves pinnated, the pinnæ of a lineari-lanceolate figure.

The root is tuberous, of the ſize of a ſmall walnut, brown on the ſurface, and white within; it lies at a conſiderable depth. The radical leaves are pinnated, three inches long, and two and a half broad in the whole; the pinnæ are narrow, oblong, and pointed at the ends. The ſtalk is round, ſmooth, and divided, toward the top, into two or three branches; it's leaves ſtand ſingly, and are much finer than thoſe of the root: the umbels ſtand at the tops of the branches; they are ſmall, and the flowers are ſmall and white.

It is common with us in paſtures, and it's root is eſculent. Authors have divided it into two ſpecies, from it's being ſometimes larger, ſometimes ſmaller; but theſe are only varieties, the plant the ſame; they call it, in theſe two ſtates, Bulbocaſtacum majus, and Bulbacoſtacum minus.

2. *Bunium foliis omnibus pinnatis, pinnis linearibus oblongis, umbellis majuſculis.* **Bulbous Cummin.**

The Bunium, with all the leaves pinnated, the pinnæ linear and oblong, the umbels large.

The root is tuberous, of the ſize of a large nutmeg, black on the outſide, white within: the radical leaves ſtand on pedicles of two inches long, reddiſh and ſlender; they are divided into a multitude of oblong and narrow ſegments, of a deep green colour. The ſtalk is round, branched at the top, and about eight inches high; it's leaves ſtand ſingly, and are like the radical ones, but ſmaller. The umbels are moderately large, the flowers white.

It is a native of the mountains in Germany. Tournefort calls it, Bulbocaſtacum minus ſaxatile peucedani folio; Columna, Cyrinicum bulboſum.

The other ſpecies are, 1. The broad-leaved, Alpine Bunium. 2. The narrow and ſhort-ſegmented Bunium.

CONIUM.

THE general umbel is compoſed of a number of patent radii; the partial umbel is ſimilar: the general involucrum is very ſhort, and compoſed of ſeveral leaves; the partial involucrum is ſimilar: the proper perianthium is ſcarce diſcernible: the general corolla is uniform: the ſingle flowers conſiſt each of five inflexo-cordated ſegments, unequal in ſize: the ſtamina are five ſimple filaments; the antheræ are roundiſh; the germen ſtands below the perianthium: the ſtyles are two, and reflex; the ſtigmata are obtuſe: there is no pericarpium: the fruit is roundiſh, ſtriated, and diviſible into two parts: the ſeeds are two, convex, and nearly hæmiſpherical on one ſide, where they are ſtriated; and plane on the other.

Of this genus there is only one known ſpecies, the Cicuta of authors.

CONIUM. Hemlock.

The root is large, oblong, and white, often a foot in length, and of the thickneſs of a moderate parſnep, of a fungous ſubſtance, and ſtrong ſmell, but of an agreeable taſte; the radical leaves are very large, a foot and a half long, and as much in diameter at the baſe; they are compoſed of a multitude of ſhort, ſerrated, broad pinnæ, of a dark green colour, and bad ſmell. The ſtalk is round, ſmooth, jointed, and branched at the top; it grows to an inch in diameter at the baſe, and to five feet high; it is uſually variegated in a beautiful manner with purple ſpots, on a dark green ground: the leaves ſtand ſingly, and are like the radical ones, but ſmaller: the umbels ſtand on the tops of the branches; they are very large; the flowers are moderately large, and white.

It is common in our hedges. C. Bauhine calls it, Cicuta major; Lobel, Cicuta; Linnæus and Van Royen, Conium ſeminibus ſtriatis.

It is poiſonous taken internally, but it is uſed in plaiſters, and other external applications. The other plants, erroneouſly deſcribed under the ſame generical name with this by authors, will be found here under the genera of Ligusticum, Cicuta, &c.

SELINUM.

THE general umbel is multiple, and plano-patent; the partial umbel is ſimilar: the general involucrum is compoſed of a number of lanceolated, linear, reflex leaves; the partial one is ſimilar, patent, and of the length of the corolla: the proper perianthia are ſcarce viſible: the general corolla is uniform: the ſingle flowers conſiſt each of five unequal, inflexo-cordate petals: the ſtamina are five capillary filaments; the antheræ are roundiſh; the germen is placed below the proper receptacle: the ſtyles are two, and reflex; the ſtigmata are ſimple: there is no pericarpium: the fruit is of an elliptico-oblong, compreſſo-plane figure, ſtriated each way in the middle, and ſeparable into two parts: the ſeeds are two, of an oblong, elliptic figure, plane on each ſide, ſtriated in the middle, and edged with membranaceous rims at the ſides.

This genus comprehends the Oreoſelinum and Thyſſelinum of Tournefort, and the Cervaria of Rivinus.

1. *Selinum paluſtre leviſſime lacteſcens radice unica.*
The marſh Selinum, lightly milky, and with a ſingle root.

The root is ſingle, oblong, and moderately large, of a browniſh colour, and diſagreeable, acrid taſte: the radical leaves ſtand on long pedicles; they are large, divided into a multitude of oblong, narrow ſegments, and of a dark green colour: the ſtalk is round, jointed, branched at the top, and grows to five feet high; the leaves ſtand ſingly on it, and are like the radical ones, but ſmaller: the umbels are large and ſpreading, the flowers white. The whole plant is lightly lacteſcent, or, on being cut, yields a ſmall quantity of a ſomewhat milky juice.

It is frequent in marſhy places, in moſt parts of Europe. Tournefort calls it, Thyſſelinum paluſtre; C. Bauhine, Seſeli paluſtre lacteſcens.

2. *Selinum pinnis ad angulos obtuſos pinnatis, pinnulis inciſis, non ſerratis.*
The Selinum, with the pinnæ pinnated at obtuſe angles, the pinnules laciniated, not ſerrated.

The root is very large, oblong, and furniſhed with fibres at the head; it is often a foot long, and of the thickneſs of a child's wriſt, white, of an acrid taſte, and, when cut, yields a viſcid, milky liquor in plenty: the radical leaves are very large, formed of a multitude of pinnæ, beautifully diſpoſed, and of an oval figure, but pointed at the ends, and laciniated at the edges. The ſtalk is round, jointed, branched at the top, and four feet high; the leaves ſtand alternately on it, and are like the radical ones, but ſmaller: the umbels are large, the flowers white.

It is frequent on the mountains in Germany. Cluſius calls it, Oreoſelinum; C. Bauhine, Apium montanum folio ampliore.

3. *Selinum foliis radicalibus ovatis inequaliter ſerratis, radice multiplici.*
The oval, ſerrated-leaved Selinum, with a multiple root.

The root is compoſed of a number of oblong bodies, each half an inch in diameter, and often two feet long, all capillated at their tops, black on the outſide, white within, and, when cut, affording a thick, mucilaginous juice, of a reſinous, but not diſagreeable taſte: the radical leaves are a foot and a half long, and ſtand on long pedicles; they are compoſed of a multitude of pinnæ, of a kind of oval figure, but pointed and jagged round the edges; they are of a bluiſh-green colour, thick, rigid, and gloſſy: the ſtalk grows to five or ſix feet high; it is round, ſtriated, and ramoſe; the leaves ſtand alternately on it, and are like the radical ones: the umbels are large, and the flowers white.

It is frequent about the banks of the Rhine, and in the German vineyards. J. Bauhine calls it, Libanotis dicta cervaria nigra; others, Libanotis nigra; C. Bauhine, Daucus montanus apii folio major.

The other ſpecies are, 1. The yellow-flowered, cicuta-leaved Selinum. 2. The aniſe-leaved, oriental Selinum, called African aniſe, and ſhrubby Ferula. 3. The broad-leaved Selinum, called the Thyſſelinum of Pliny; and, 4. The Siberian Selinum, with ſimply-pinnated, inciſo-angulated leaves.

ATHAMANTA.

THE general umbel is multiple and patent; the partial umbel is compoſed of fewer radii: the general involucrum is compoſed of many leaves, linear, and ſomewhat ſhorter than the radii; the partial involucrum is linear, and equal to the rays in length: the proper perianthium is ſcarce diſtinguiſhable: the general corolla is uniform: the ſingle flowers conſiſt of five inflexo-cordate petals, ſomewhat unequal: the ſtamina are five capillary filaments, of the length of the corolla: the antheræ are roundiſh; the germen ſtands below the perianthium: the ſtyles are two, and reflex; the ſtigmata are obtuſe: there is no pericarpium: the fruit is compoſed of two oval ſeeds, convex, and ſtriated on one ſide, ſmooth and plane on the other, and is of an oval figure.

1. *Athamanta foliis capillaribus, ſeminibus glabris.* Spignel.
The capillary-leaved Athamanta, with ſmooth ſeeds.

The root is oblong, and moderately thick, ſometimes ſingle, ſometimes multiple, brown on the outſide, and white within, and uſually furniſhed at the head with a tuft of hairy matter, formed of the fibres of decayed leaves; the radical leaves are very large; they ſtand on long pedicles, and are divided into a multitude of extremely narrow and oblong ſegments; they ſomewhat reſemble the leaves of fennel, but the ſegments are finer, and not ſo long. The ſtalk is round, ſtriated, and branched toward the top; the leaves ſtand alternately on it, and are like the radical ones, but ſmaller: the umbels are moderately large, the flowers ſmall and whitiſh, the ſeeds large, oblong, ſtriated, and ſmooth.

We have it wild in the north of England in abundance. C. Bauhine calls it, Meum foliis anethi; others, Meum, and Meum officinarum.

The root has been in much eſteem as an alexipharmic, and is an ingredient in ſeveral of the old compoſitions.

2. *Athamanta foliis inferioribus nitidis, umbellis primordialibus ſubſeſſilibus, ſeminibus piloſis.*
The ſmooth-leaved Athamanta, with the primordial umbels ſubſeſſile, and the ſeeds hairy.

The root is oblong, thick, and furniſhed with many fibres: the radical leaves are large; they ſtand on long pedicles, and are divided into a multitude of fine, very narrow ſegments, and of a gloſſy ſurface. The ſtalk is round, jointed, ramoſe, and a little

little hairy: the leaves ſtand alternately on it, and are like the radical ones, but ſomewhat hairy: the umbels are large; the flowers ſmall and white; the ſeeds hairy: the primordial umbel is ſubſeſſile, the lateral ones riſe.

It is a native of Italy, Sicily, and ſome parts of Germany; authors have been much puzzled how to arrange it. Haller calls it, Libanotis foliis multifidis planis; Morriſon, Myrrhis Sicula elatior tenuioribus foliis; Tournefort, Chærophyllum Siculum foliis ſophiæ, ſemine villoſo.

3. *Athamanta foliis duplicato-pinnatis, planis, umbella hæmiſpherica, ſeminibus hirſutis.*

The duplicato-pinnate, plane-leaved Athamanta, with hæmiſpheric umbels, and hairy ſeeds.

The root is oblong, and very large, often of the thickneſs of a man's wriſt, blackiſh on the outſide, white within, and full of an acrid, gummous juice: the radical leaves are large, and compoſed of a multitude of pinnæ, ſomewhat broad, ſerrated at their edges, and of a pale green colour on the upper ſurface, and greyiſh below. The ſtalk is thick, round, ſtriated, and about three feet high: the leaves ſtand alternately on it, and are like thoſe below, but ſmaller; the umbels are large; the flowers white.

It is frequent on the mountains of Germany. C. Bauhine calls it, Daucus montanus apii folio albicans; J. Bauhine, Ccrvariæ nigræ ſpecies; Rivinus and Haller, Libanotis pinnulis circa coſtam dentatis. Many of the botanical writers have alſo deſcribed it a ſecond time, as a different plant, under the name of Apium petræum albicans.

PEUCEDANUM.

THE general umbel is multiple, very long and thin; the partial umbel is patent: the general involucrum is ſmall, and formed of ſeveral linear, reflex leaves; the partial involucrum is ſmaller: the proper perianthium is ſmall, and quinquedentated; the general corolla is uniform: the ſingle flowers conſiſt each of five equal, oblong, crooked, and undivided petals: the ſtamina are five capillary filaments; the antheræ are ſimple: the germen is oblong, and is placed under the proper receptacle: the ſtyles are two, and ſmall; the ſtigmata are obtuſe: there is no pericarpium. The fruit is oval, ſurrounded with an ala, ſtriated on both ſides, and ſeparable into two parts: the ſeeds are two, of an oval, oblong, compreſſed figure on one ſide, convex, and marked with three elevated ridges; the edge, ſurrounded with a membranaceous ala, with the top emarginated. The central flowers are often abortive.

1. *Peucedanum foliis quinquies tripartitis lineari-ſubulatis integerrimis.* Hog's Fennel.

The Peucedanum, with five lineari-ſubulated, not ſerrated ſegments.

The root is oblong and large, of a blackiſh colour on the outſide, greeniſh within, and full of a ſtrong ſmelling juice; at the top there is generally a tuft of hairy matter, formed of the fibres of decayed leaves: the radical leaves ſtand on moderately long pedicles; they are large, and divided into a multitude of very narrow, ſubulated ſegments, even at the edges, ſmooth, and of a deep green: the ſtalk is round, ſtriated, jointed, and two or three feet high: the leaves ſtand ſingly on it, and are like the radical ones, but ſmaller: the umbels are very large; the flowers ſmall and yellowiſh.

We have it in our fen ditches; I met with it this year in the iſle of Ely plentifully. Lobel calls it, Peucedanum; C. Bauhine, Peucedanum Germanicum.

The other ſpecies are, 1. The ſhorter-leaved Peucedanum; and, 2. The broader-leaved, purple Peucedanum.

CRITHMUM.

THE general umbel is multiple, and of an hæmiſpheric figure; the partial umbels are ſimilar. The general involucrum is formed of ſeveral reflex, obtuſe, lanceolate leaves; the partial involucrum is lanceolato-linear, and of the length of the umbel: the proper perianthium is inconſiderable; the general corolla is uniform: the ſingle flowers conſiſt each of five oval, inflex, and nearly equal petals: the ſtamina are five ſimple filaments, longer than the corolla; the antheræ are roundiſh; the germen ſtands under the perianthium: the ſtyles are two, and reflex; the ſtigmata are obtuſe: there is no pericarpium. The fruit is oval, compreſſed, and ſeparable into two parts; the ſeeds are two, elliptic, ſtriated on one ſide, and compreſſo-plane.

1. *Crithmum foliis lanceolatis carnoſis.*
The lanceolate, thick-leaved Crithmum. **Samphire.**

The root is oblong, and as thick as a child's arm, and of an agreeably aromatic taſte. The radical leaves are large, and beautifully divided into a number of oblong, narrow, pointed, and thick ſegments, fleſhy, and full of juice: the ſtalk is round, thick, ſtriated, ramoſe, and about fifteen inches high, of a fine ſtrong green, as are alſo the leaves: the umbels are large; the flowers yellow: the whole plant is ſucculent, and of a ſaltiſh taſte.

It is frequent on our ſea-coaſts, and it's leaves make an excellent pickle. C. Bauhine calls it, Crithmum ſive fœniculum maritimum minus; Lobel, Fœniculum marinum ſive empetrum.

2. *Crithmum foliis linearibus, umbellis minoribus.*
The linear-leaved Crithmum, with ſmaller umbels.

The root is thick and oblong; the leaves, which riſe from it, are large, of a pale green, and divided into a multitude of long and narrow ſegments: the ſtalk is procumbent in part, and ſtriated, but riſes ſometimes to two or three feet from the procumbent part: the leaves are placed alternately on it, and are like the radical ones, but ſmaller: the umbels are large; the flowers white. The whole plant is ſucculent, and, when wounded, it yields a yellow, reſinous juice.

It is frequent on the coaſts of Italy and Sicily. C. Bauhine calls it, Crithmum maritimum grandius cui ſuccus luteus; Boccone, Crithmum Siculum baticulæ alterum genus.

CACHRYS.

THE general umbel is multiple; the partial umbels are ſimilar: the general involucrum is formed of ſeveral lineari-lanceolate leaves: the partial ones are ſimilar: the proper perianthium is ſcarce obſervable: the general corolla is uniform; the ſingle flowers conſiſt each of five equal, lanceolated, and ſomewhat erect petals: the ſtamina are five ſimple filaments, of the length of the corolla: the antheræ are ſimple; the germen is turbinated, and ſtands below the perianthium: the ſtyles are two, ſimple, and of the length of the corolla; the ſtigmata are capitated. The fruit is roundiſh, but ſomewhat oval, angulated, obtuſe, very large, and ſeparable into two parts: the ſeeds are two, very large, very convex on one ſide, plane on the other, fungous, and each containing a ſingle ovato-oblong nucleus.

1. *Cachrys foliis multifidis, ſegmentis lineari-lanceolatis.*
The Cachrys, with multifid, lineari-lanceolate leaves.

The root is a foot long, and an inch and half in diameter; at top white, and of an acrid taſte: the radical leaves are very large, and divided into multitudes of fine, oblong, narrow, and pointed ſegments: the ſtalk is thick, round, ſtriated, ramoſe, and jointed; it's leaves alternate, and like the radical ones, but ſmaller: the umbels are very

very large; the flowers yellow: the ſeeds are very large and beautiful. It is, in the whole, an extreamly beautiful plant.

It is frequent in Spain, Italy, and ſome other parts of Europe. C. Bauhine calls it, Libanotis Cachryophoros ſemine anguloſo; J. Bauhine, Libanotis Cachryoparos floribus luteis.

2. *Cachrys foliis ovato-oblongis aſperis.*
The ovato-oblong-leaved, rough Cachrys.

The root is very large, oblong, white, and well taſted; the radical leaves are irregularly pinnated or formed of a multitude of oblong, oval ones, of a pale green colour, and covered thick with a downy matter: the ſtalk is round, ſtriated, ramoſe, and three feet high: the leaves ſtand alternately, and are like the radical ones, but ſmaller; both they and the ſtalk are rough and hairy: the umbels are very large; the flowers yellowiſh, ſometimes quite white; the ſeeds are very large and beautiful.

It is a native of Ruſſia, Hungary, and Tartary; C. Bauhine calls it, Panaci Heracleo ſimilis Ungarica; others, Panacea Ungarica edulis. The Ruſſians and Tartars, in ſcarcity of corn, make bread of it's roots.

The other ſpecies are, 1. The fennel-leaved Cachrys. 2. The broader peucedanum-leaved Cachrys. 3. The ſmaller-ſeeded peucedanum-leaved Cachrys. 4. The angelica-leaved, aſphodel-rooted Cachrys.

FERULA.

THE general umbel is multiple and globoſe; the partial umbel is ſimilar: the general involucrum is deciduous; the partial involucrum is ſmall, compoſed of ſeveral narrow leaves: the proper perianthium is very ſmall, and ſtands on the germen: the general corolla is uniform; the ſimple flowers conſiſt each of five oblong, erect, and nearly equal petals: the ſtamina are five filaments, of the length of the corolla; the antheræ are ſimple: the germen is turbinated, and placed under the cup: the ſtyles are two, and reflex; the ſtigmata are obtuſe. The fruit is elliptic, plano-compreſſed, marked on each ſide with five prominent ridges, and ſeparable into two parts: the ſeeds are two, very large, elliptic, plane on each ſide, and marked each with three diſtinct ſtriæ: the peduncle of the primary umbel has ſometimes lateral and oppoſite peduncles growing from it.

1. *Ferula foliis linearibus longiſſimis ſimplicibus.* **Fennel Giant.**
The Ferula, with very long, linear, ſimple leaves.

The root is thick, oblong, and full of a milky juice; the radical leaves are very large, and finely divided; they ſomewhat reſemble thoſe of fennel, but the ſegments are longer and broader; they are of a pale green: the ſtalk is round, thick, and eight or nine feet high: the leaves on it are alternate, and like the radical ones, but ſmaller: the umbels are very large, and almoſt globular; the flowers large and yellow: the ſmell of the whole plant is ſtrong, and the taſte acrid.

It is a native of Italy and France. Dodonæus calls it, Ferula; C. Bauhine, Ferula fœmina Plinii.

2. *Ferula foliis laciniatis, laciniis tridentatis inequalibus.*
The laciniated-leaved Ferula, with tridentated, unequal ſegments.

The root is a foot and half long, and two inches in diameter; full of a yellowiſh, milky juice, of an acrid taſte. The radical leaves are very large, gloſſy, and divided into a multitude of ſegments, which are oblong, ſomewhat broad, and three-pointed: the ſtalk is very thick, round, ſtriated, and grows to ſix or ſeven feet high; the leaves are alternate: the umbels very large, globoſe, and of a yellowiſh hue: the ſeeds large, and deeply ſtriated.

It is a native of Italy and Spain. Herman calls it, Ferula Tingitana folio latiſſimo, lucido.

3. *Ferula foliorum alis utrinque acutis, foliolis linearibus integerrimis, umbellibus terminalibus subsessilibus.*
The linear and undivided-leaved Ferula, with terminatory, subsessile umbels.

The root is nine inches long, an inch thick, of a brown colour, and full of a milky acrid juice, somewhat yellowish. The radical leaves are large, and divided into a multitude of segments, oblong, narrow, rigid, and glossy: the stalk is round, striated, and ramose: the leaves on it are alternate, finely divided, and glossy: the umbels large and globose, the flowers small and yellow.

It is a native of Istria. Lobel calls it, Panax Asclepium Ferulæ folio. C. Bauhine, Libanotis Ferulæ folio et semine.

The other species are, 1. The broader-leaved Ferula. 2. The very fine-leaved Ferula. 3. The rigid and short-leaved Ferula. 4. The glossy-leaved, Canada Ferula.

LASERPITIUM.

THE general umbel is very large, and has from twenty to forty radii; the partial umbel is plane, and consists also of numerous radii: the general involucrum is small, and composed of many leaves; the partial involucrum is also small, and formed of many leaves: the proper perianthium is inconsiderable, but quinquedentated: the general corolla is uniform: the single flowers each consist of five nearly equal petals, inflexo-cordated at the ends: the stamina are five setaceous filaments, of the length of the corolla; the antheræ are simple: the germen is roundish, and stands under the proper perianthium: the styles are two, thick and acuminated; the stigmata are obtuse and patent: there is no pericarpium. The fruit is oblong, and separable into two parts, and is ridged, with eight longitudinal membranes: the seeds are two, very large, oblong, and semi-cylindric, plane on one side, but on the other ornamented on the back and edges, with four membranes.

1. *Laserpitium foliolis cordatis incisis.* Small Laserwort.
The laciniated, cordated-leaved Laserpitium.

The root is very long, thick, and white, and has usually a tuft of hairy or fibrose matter at it's top, formed of the fibres of decayed leaves. The radical leaves are large; the foliola or pinnæ, which compose them, are of an oval figure, cordated, and cut in round the edges; they are of a bright green above, and a bluish green underneath: the stalk is round, not very thick, striated, rigid, and ramose; the leaves on it stand alternately: the umbels are very broad; the flowers small and white, the seed beautifully edged with membranes.

It is frequent on the mountains of Germany. Rivinius calls it simply, Laserpitium; Morison and Tournefort, Laserpitium foliis latioribus lobatis; C. Bauhine, Libanotis latifolia vulgatior. It's root has been kept in the shops, under the name of white Gentian, and also it's seeds, but both are now disused.

2. *Laserpitium foliolis sessilibus tricuspidatis.* Great Laserwort.
The Laserpitium, with sessile, tricuspidate foliola.

The root is very large and long, greyish on the outside, white within, of a fungous substance, and agreeable smell: the radical leaves stand on long pedicles, and are very large, divided and subdivided; the pinnæ or foliola are short, broad, rigid, and terminated by three segments: the stalk is round, striated, and six or seven feet high; it's leaves large, and like the radical ones, placed alternate at the joints, and a little hairy underneath: the umbels are large; the flowers moderately large; the seeds beautifully edged with membranes, and of a yellowish colour.

It is a native of the southern parts of France. C. Bauhine calls it, Laserpitium Gallicum; J. Bauhine, Laserpitium regione Massiliæ alatum.

The other ſpecies are, 1. The very long and narrow-leaved Laſerpitium. 2. The ſtinking Laſerpitium, with angulated, brittle leaves. 3. The ſelinum-leaved Laſerpitium. 4. The Laſerpitium, with undivided and even foliola. 5. The daucus-leaved Laſerpitium, with viſcous ſeeds. 6. The broad, lobated-leaved Laſerpitium. 7. The great, roundiſh-leaved, Alpine Laſerpitium. 8. The purple, ſmallage-leaved Laſerpitium. 9. The very long-leaved Laſerpitium.

HERACLEUM.

THE general umbel is very large, and multiple; the partial umbel plane: the general involucrum is deciduous, and formed of ſeveral leaves; the partial involucra are dimidiated outwardly, and conſiſt of lineari-lanceolate leaves, from three to ſeven in number; the exterior ones longer than the others; the proper perianthium is ſcarce viſible: the general corolla is difform and radiated: the ſingle flowers of the diſk conſiſt each of five equal petals; the ſingle flowers of the radius conſiſt of five petals, unequal in ſize; the exterior ones being larger and more bifid, oblong and uncinated. All the flowers have five ſtamina, longer than the petals; the antheræ are ſmall: the germen is of a ſubovate figure, and ſtands under the cup; the ſtyles are two, erect and ſhort; the ſtigmata ſimple: the fruit is elliptic, compreſſed and emarginated, and ſtriated on each ſide in the middle; the ſeeds are two, oval, compreſſed, and foliaceous.

In ſome of the Heraclea, the flowers of the radius only are females and fertile, thoſe of the diſk males, ſteril or abortient: ſome are throughout hermaphrodites, and the involucra are ſometimes wanting. This genus comprehends the Sphondylium of authors.

1. *Heracleum foliis pinnatis, foliolis quinis, intermediis ſeſſilibus, floribus radiatis.*

The pinnated-leaved Heracleum, with quinate leaves, and radiated flowers.

The root is two feet long, and three inches in diameter; the radical leaves are large, and formed of a multitude of ſmall, cordated, and acuminated leaves, placed in a regular and very ſingular quinate order; they are rigid, of a ſtrong green, and a little hairy: the ſtalk is as thick as a child's arm, round, ſtriated, reddiſh toward the bottom; the leaves on it like the radical ones, but ſmaller: the umbels are large and white, the ſeed broad.

It is a native of the Alps, and of Siberia. Dalechamp calls it, Panax Heracleum; C. Bauhine, Panax ſphondylii folio.

2. *Heracleum foliis pinnatifidis.* Cow Parſnep.

The pinnatifid-leaved Heracleum.

The root is large and white; the radical leaves very large, divided into a multitude of larger or ſmaller ſegments, of a greyiſh green, and hairy: the ſtalk is ſtriated, thick, and five feet high; the umbels very broad: the flowers white; the ſeeds large and broad.

It is common in our meadows. C. Bauhine calls it, Sphondylium vulgare hirſutum; others ſimply, Sphondylium.

The other ſpecies are, 1. The green-flowered, quinate-leaved, Siberian Heracleum. 2. The ſmooth, broad-leaved, Alpine Heracleum.

LIGUSTICUM.

THE general umbel is multiple; the partial ones alſo multiple: the general involucrum is unequal, and compoſed of ſeven leaves; the partial involucra have only three or four leaves: the perianthium is ſmall, quinquedentate, and is placed on the germen: the general corolla is uniform: the ſingle flowers conſiſt each of five equal petals, bent at the points, and carinated inwards: the ſtamina are five capillary filaments, ſhorter than the corolla; the antheræ are ſimple: the germen is placed under the

the receptacle: the ſtyles are two, and ſimple; the antheræ are ſimple: the fruit is naked, oblong, angular, ſulcated, and ſeparable into two parts; the ſeeds oblong, ſmooth, ſtriated on one ſide, and plane on the other.

This genus comprehends the Liguſticum ſiler, and Cicutaria of authors.

1. *Liguſticum foliis multiplicibus, foliolis ſuperne inciſis.* Lovage.
The Liguſticum, with multiple leaves cut in on the upper part.

The root is thick, long, and woody; the leaves are very large, and formed of a multitude of ſmaller leaves, which are broad, large, and cut in toward the top: the ſtalk is round, ſtriated, ramoſe, and ſix feet high: the umbels are large, the flowers yellow.

It is a native of Germany. C. Bauhine calls it, Liguſticum vulgare. It's ſeed is an aromatic and carminative.

2. *Liguſticum foliis multiplicato-pinnatis, foliolis pinnatim inciſis.* Stinking Hemlock.
The multiplicato-pinnate-leaved Liguſticum, with the leaves divided pinnately.

The root is large, long, and white; the leaves very large and compound; the pinnæ divided themſelves in a pinnated manner, jagged at the edges, and of a dark green: the ſtalk is round, ſtriated, ramoſe, and four feet high; the umbels are very broad; the flowers ſmall and white, the ſeeds ſhort.

It is a native of the Alps. C. Bauhine calls it, Cicutaria latifolia fœtidiſſima; Parkinſon, Seſeli Peleponneſiacum.

The other ſpecies are, 1. The great, narrow-leaved, ſtinking Liguſticum. 2. The narrow-leaved Liguſticum, called Siler montanum. 3. The great, fine-divided-leaved Liguſticum. 4. The great, ſmooth, hemlock-leaved Liguſticum. 5. The long and multifid-leaved Liguſticum. 6. The ſmallage-leaved Liguſticum. 7. The ferule-leaved Liguſticum.

ANGELICA.

THE general umbel is roundiſh and multiple; the partial umbel, while in flower, is perfectly globoſe: the general involucrum is compoſed of either three or five leaves; the partial involucrum is ſmall, and compoſed of eight leaves: the proper perianthium is ſmall, and quinquedentate; the general corolla is uniform: the ſingle flowers conſiſt each of five deciduous, lanceolated, and ſlightly crooked petals: the ſtamina are five ſimple filaments, longer than the corolla; the antheræ are ſimple: the germen ſtands under the perianthium: the ſtyles are two, and reflex; the ſtigmata obtuſe. The fruit is naked, roundiſh, angular, and ſeparable into two parts: the ſeeds are two, of an oval figure, plane on one ſide, and ſurrounded with a rim; convex on the other, with three longitudinal ridges.

1. *Angelica foliorum impari lobato.* Angelica.
The Angelica, with the odd leaf lobated.

The root is brown, oblong, an inch or two thick, fragrant and acrid. The leaves are very large, compoſed of pinnated foliola, of an oblong, oval figure, dentated at the edge, and the odd leaf at the end of the pinna lobated: the ſtalk is round, ſtriated, as thick as a child's arm: the umbels are very large, and of a globoſe figure: the flowers very ſmall and greeniſh.

It is wild with us in ſome places, but is alſo very common in our gardens. C. Bauhine calls it, Angelica ſativa. It's root is a cardiac, alexipharmic, ſudorific, and carminative, and is much uſed in the ſhops.

The other ſpecies are, 1. The lucid-leaved, American Angelica, called, by Tournefort, American Maſterwort. 2. The great, narrow, ſerrated-leaved Angelica. 3. The great, narrow-leaved, water Angelica. 4. The yellow-flowered, Canada Angelica, 5. The

5. The little, umbelled Angelica. 6. The ſmallage-leaved Angelica. 7. The Columbine-leaved Angelica.

SIUM.

THE general umbel is of an uncertain figure; the partial umbels are patent and plane: the general involucrum is compoſed of many leaves, reflex and ſhorter than the umbels: the leaves are lanceolate: the partial involucrum is ſmall, and formed of ſeveral linear leaves; the proper perianthium is very ſmall: the general corolla is uniform; the ſingle flowers are compoſed each of five equal, inflex petals: the ſtamina are five ſimple filaments; the antheræ are ſimple: the germen is ſmall, and ſtands under the perianthium: the ſtyles are two, and reflex; the ſtigmata are obtuſe. The fruit is naked, of an oval or roundiſh figure, ſmall, ſtriated, and ſeparable into two parts: the ſeeds are two, roundiſh, ſtriated, and convex on one ſide, plane on the other.

1. *Sium foliis pinnatis, umbella terminatrice.* Water
The Sium, with pinnated leaves, and terminatory umbels. Parſnep.

The roots are fibrous; the leaves are ſimply pinnated, or compoſed of only two ſeries of foliola, arranged along a middle rib, with an odd one at the end; they are oblong, oval, and ſerrated at the edges: the ſtalk is thick, jointed, and ſtriated; the umbels are large; the flowers ſmall and white; the ſeeds ſhort.

The plant is common in ditches with us. C. Bauhine calls it, Sium majus latifolium; others, Paſtinaca aquatica.

2. *Sium foliis pinnatis, floralibus ternatis.*
The pinnated-leaved Sium, with the floral ones ternate. Skirret.

The root is compoſed of a number of oblong, thick, tender, brittle tuberoſities, of a whitiſh colour, and agreeable taſte. The leaves are pinnated; the pinnæ oval or oblong, pointed at the ends, and ſerrated deeply round the edges: the ſtalk is round, ſtriated, ramoſe, and two feet high; the leaves on it like the radical ones, but ſmaller, of a dark green, and more pointed at the ends: the umbels are ſmall; the flowers white, and of a very ſweet ſmell.

It is a native of the Eaſt Indies, but common in our gardens; the roots are eaten. C. Bauhine calls it, Siſarum Germanicum; Dalechamp, Siſarum majus.

3. *Sium foliis integris pinnatis, et trilobatis, ſoboliferum.* Nin-
The ſoboliferous Sium, with entire, pinnated, and trilobated leaves. zin.

The root is oblong; and of the thickneſs of a man's little finger; whitiſh, ſoft, and ſurrounded on the ſurface by many ſlight, circular furrows, of an agreeable ſmell, and ſweet taſte, with ſomething aromatic and bitter. It's length is uſually about three inches, and toward the bottom it is often divided into two parts, which the Chineſe ſuppoſe to reſemble the legs of a man, as the upper part, which is ſingle, the body; 'tis hence that they call the plant Nindſin, which ſignifies like a man. As the plant grows up, there are often two or three more of theſe roots, produced by the ſides of the firſt, and they all become ſomewhat larger. The upper parts of them all are furniſhed alſo with numbers of tubercles, ſome of which are to become mere roots, ſome are to give riſe to leaves and ſtalks.

The ſtalk grows to two feet high; it is round, thick, ſtriated deeply, and has round prominent joints, at about an inch and half diſtance; from theſe joints ariſe ſo many branches, and the ſtalk itſelf is alſo ramoſe at the top: the leaves ſtand alternately, one at every joint: their pedicles are an inch and half long; they embrace the ſtalk at their bottom, and are hollowed half the way, and ſtriated all the reſt: the leaves are of very different ſize and figure, according to the ſtate of the plant. The firſt leaves that appear are ſimple, roundiſh, cordated at the baſe, and ſerrated round the edges, and about an inch long. As the plant grows up, they become pinnated, and are compoſed of three or four pair of pinnæ, moderately large, of an ovato-acuminated figure, and ſerrated round the edges. Finally, as the plant grows taller, thoſe on the upper part of the ſtalk are trilobate, and the pinnæ ſmaller, ſcarce exceeding the ſize of one's

nail. They are all of a bright green, and ſmooth: the umbels are about two inches broad, the flowers ſmall and white; the ſeeds are like thoſe of aniſe in ſhape and ſize, but reddiſh, and bifid; and beſide the ſeeds there are produced, in the divarications of the upper branches, a kind of ſoft tubercles, of a turbinated figure, and of the bigneſs of a pea, which planted in the earth, or naturally falling on it, produce new plants. The roots are gathered in the beginning of winter, and prepared by macerating ſome days in a decoction of rice, and then imbibing the ſteam of the ſame decoction before drying; they are by this means rendered almoſt tranſparent.

The plant is a native of China and Tartary, probably alſo of ſome parts of North America, as the Ginſeng alſo is. The Chineſe call it, Niſji, Nindſin, and Dſin; the Tartars, Soſai; Kœmpfer calls it, Siſarum montanum coræenſe radice non tuberoſa. It is eſteemed, all over the Eaſt, a powerful cordial, and a provocative to venery, and is given in almoſt all diſeaſes; they uſe it in the ſame caſes with the Ginſeng, but the other is preferred greatly to it.

The other ſpecies of Sium are, 1. The ſerrated-leaved, water Sium. 2. The greateſt, broad-leaved Sium. 3. The creeping Sium. 4. The Sium flowering at the joints, with ſeſſile umbels. 5. The aromatic Sium, or Amomum of the ſhops.

BUBON.

THE general umbel is compoſed of about ten radii, the middle ones ſhorter than the reſt; the partial umbel has from fifteen to twenty radii: the general involucrum is compoſed of five equal, lanceolated, acuminated leaves, much longer than the umbel, and permanent: the partial involucrum is compoſed of a larger number of the like leaves, of the length of the umbel: the proper perianthium is permanent, very ſmall, and quinquedentate; the general corolla is uniform: the ſingle flowers conſiſt each of five oblong petals, of a lanceolated figure, and inflex: the ſtamina are five ſimple filaments, of the length of the corolla; the antheræ are ſimple: the germen is oval, and ſtands under the receptacle; the ſtyles are two, ſetaceous, permanent, nearly of the length of the corollula, and reflexo-patent: the ſtigmata are obtuſe; the fruit is naked, oval, ſtriated, hairy, coronated, and ſeparable into two parts: the ſeeds are two, oval, plane on one ſide, and on the other convex, ſtriated, and hairy.

Bubon foliolis rhomboideo-ovatis inciſis, umbellis numeroſiſſimis. Macedonian parſley.

The Bubon, with rhomboideo-oval, ſerrated foliola, and very numerous umbels.

The root is oblong, white, and as thick as a man's finger; the leaves are compoſed of a number of pinnæ, which are large, ſomewhat like thoſe of ſmallage, ſerrated round the edges, ſmooth, and of a dark green. The ſtalk is round, ſtriated, ramoſe, and two feet high, hairy, and but moderately thick; the umbels are ſmall, very numerous, and white.

It is a native of Macedonia; we have it in gardens. C. Bauhine calls it, Apium Macedonicum; others, Petroſelinum Macedonicum. It's ſeeds are carminative, and are ingredients in many compoſitions.

CUMINUM.

THE general umbel, and the partial ones alſo, are frequently quadripartite. The general involucrum is compoſed of four leaves, longer than the umbel; they are ſometimes intire, ſometimes trifid; the partial involucrum is ſimilar: the proper perianthium is very ſmall; the general corolla is uniform: the ſingle flowers conſiſt each of five inflexo-emarginated, and ſomewhat unequal petals: the ſtamina are five ſimple filaments; the antheræ are ſimple: the germen is oval, larger than the flower, and ſtands under it's cup: the ſtyles are two, and very ſmall; the ſtigmata are ſimple: the fruit is naked, of an oval figure, and ſtriated: the ſeeds are two, of an oval figure, convex and ſtriated on one ſide, ſmooth and plane on the other.

Of this genus there is only one known ſpecies.

CUMINUM. Cummin.

The root is oblong, ſlender, white, and of a ſweetiſh taſte; the leaves are ſmall, and divided into a multitude of fine oblong, narrow ſegments, of a duſky green colour, and ſmooth: the ſtalk is round, ſtriated, ramoſe, and about a foot high; the umbels are moderately large; the flowers ſmall and white; the ſeeds oblong and ſtriated.

It is cultivated in the iſland of Malta. C. Bauhine calls it, Cyminum ſemine longiore. The ſeeds of it are ſometimes hairy, whence ſome have attempted to make another ſpecies, under the name of Cyminum hirſuto ſemine, though they agree, that all other parts are perfectly alike in both. Some alſo have deſcribed another ſpecies, under the name of Cuminum dulce, not knowing that Cuminum dulce is the name by which the Malteſe call aniſe. The ſeeds of Cummin are carminative, but very nauſeous.

SISON.

THE general umbel conſiſts of fewer than ſix radii, and theſe unequal; the partial umbel has leſs than ten radii, and thoſe alſo unequal. The general involucrum is compoſed of four leaves, and unequal; the partial involucrum is ſimilar: the perianthium is very ſmall; the general corolla is uniform; the partial corolla is formed of five equal, lanceolated, inflex petals. The ſtamina are five capillary filaments, of the length of the corolla; the antheræ are ſimple: the germen is oval, and ſtands under the cup: the ſtyles are two, and reflex; the ſtigmata are obtuſe: the fruit is naked, oval, ſtriated, and ſeparable into two parts: the ſeeds are two, oval, convex, and ſtriated on one ſide, plane and ſmooth on the other.

1. *Siſon foliis pinnatis, umbellis pendulis.* Com Parſley.
The Siſon, with pinnated leaves, and pendulous umbels.

The root is ſmall oblong, white, and fibrated: the leaves are beautifully pinnated; they conſiſt of ſix or eight pair of oval, acuminated pinnæ, finely ſerrated round the edges, and terminated by an odd one: the ſtalks are ſlender, numerous, round, ſtriated, very ramoſe, often procumbent, or oblique. The umbels are ſmall, and in general pendulous; the flowers very ſmall and white.

It is frequent in our corn-fields. Ray calls it, Selinum ſii foliis; Tournefort, Sium arvenſe.

2. *Siſon foliolis ſubcapillaribus.* True Biſhop's Weed.
The Siſon, with ſubcapillary leaves.

The root is ſmall, oblong, whitiſh, and ſweet to the taſte: the leaves are moderately large, and divided into many ſegments, which are long, narrow, and almoſt capillary; they reſemble the leaves of fennel: the ſtalk is round, ſtriated, ramoſe, a foot and half high, and the umbels are ſmall; the flowers are moderately large and white.

It is a native of Italy; but we have it in our gardens. C. Bauhine calls it, Ammi parvum foliis fœniculi.

The ſeeds of this plant are the true Semina Ammeos of the ſhops, uſed as a carminative and aperient.

OENANTHE.

THE general umbel is compoſed of a few radii, the partial umbel of a great number: the general involucrum has many leaves; the partial involucrum is ſmall, and compoſed alſo of ſeveral leaves: the perianthium is moderately large, permanent, and quinquedentated: the general corolla is difform, and radiated: the ſingle flowers of the diſk are hermaphrodites; they conſiſt of five inflexo-cordated, and nearly equal, petals: the ſingle flowers of the radius are hermaphrodites, and conſiſt

of

of five very large, unequal, inflexo-bifid petals: the ſtamina are five ſimple filaments; the antheræ are roundiſh; the germen is placed under the cup: the ſtyles are two; they are ſubulated, and permanent: the ſtigmata are obtuſe: the fruit is naked, ſuboval, coronated, and ſeparable into two parts: the ſeeds are two, ſuboval, convex, and ſtriated on one ſide, plane on the other, and dentated at the top.

1. *OEnanthe foliis caulinis inflato-fiſtuloſis teretibus.* **Common Dropwort.**
The OEnanthe, with the leaves on the ſtalk rounded and hollow.

The root is compoſed of a number of oval tuberoſities, affixed to the ends of white and thick fibres: the radical leaves are large, and divided into a number of fine ſegments; thoſe on the ſtalk are cylindric, hollow, and terminate in a few narrow diviſions: the ſtalk is round, hollow, ſtriated, and ramoſe; it grows to two feet high: the umbels are ſmall, the flowers large and white.

The plant is common with us in wet places. C. Bauhine calls it, OEnanthe aquatica.

2. *OEnanthe foliis omnibus multifidis obtuſis ſubæqualibus.* **Hemlock Dropwort.**
The OEnanthe, with all the leaves multifid, obtuſe, and nearly equal.

The root is compoſed of a number of tuberous bodies, oblong, thick, and full of a yellowiſh, acrid juice: the leaves are large, of a pale green colour, and formed of a multitude of large, broad, and indented pinnæ. The ſtalk grows to four or five feet high, and is thick, ſtriated, and ramoſe: the umbels are very large; the flowers are white.

It is common about waters, with us. Ray calls it, OEnanthe cicutæ facie; C. Bauhine, OEnanthe cherophylli foliis. It is a terrible poiſon; many have periſhed by inadvertently eating it.

The other ſpecies are, 1. The thick, apium-leaved OEnanthe. 2. The narrow-ſegmented OEnanthe. 3. The rue-leaved OEnanthe. 4. The little, water OEnanthe. 5. The Portugal OEnanthe, with large, roundiſh ſeeds.

Claſs the Fifth. Order the Second.

Diviſion the Sixth.

Pentandria Digynia, with two naked ſeeds, and only partial involucra.

PHELLANDRIUM.

THE general umbel is multiple; the partial one is ſimilar: there is no general involucrum; the partial one conſiſts of ſeven acute leaves, of the length of the umbellule: the perianthium is ſmall, permanent, and quinquedentated: the general corolla is nearly uniform; the ſingle flowers are unequal; they are compoſed each of five acuminated, cordato-inflex petals: the ſtamina are five capillary filaments, longer than the corolla: the antheræ are roundiſh: the germen ſtands under the perianthium: the ſtyles are two, ſubulated, erect, and permanent: the ſtigmata are obtuſe: the fruit is naked, ſmooth, and coronated with the perianthium and piſtils; it is ſeparable into two parts: the ſeeds are two, oval and ſmooth.

Of this genus there is only one known ſpecies.

PHELLANDRIUM. **Water Hemlock.**

The root is oblong, thick, white, and fibrated. The ſtalk is very thick, an inch and a half, or more, in diameter, ſtriated, hollow, jointed, and ramoſe: the leaves are ſix inches long, and near as much broad, ſometimes larger, and are finely divided into narrow ſegments: the umbels are ſmall, the flowers white, but the antheræ reddiſh.

It is common in waters. Lobel calls it, Cicutaria paluſtris; C. Bauhine, Cicutaria paluſtris tenuifolia.

CICUTA.

CICUTA.

THE general umbel is roundiſh, and compoſed of numerous radii, equal in length: the partial umbels are roundiſh, and compoſed alſo of numerous, equal, ſetaceous radii: the partial involucrum is formed of a number of ſhort, ſetaceous leaves: the perianthium is very ſmall: the general corolla is uniform: the ſingle flowers conſiſt each of five nearly equal, oval, inflex, and ſmall petals: the ſtamina are five capillary filaments, longer than the corolla: the antheræ are ſimple; the germen ſtands under the cup; the ſtyles are two, filiform, longer than the corolla, and permanent: the ſtigmata are capitated: the fruit is naked, roundiſh, ſtriated, and ſeparable into two parts: the ſeeds are two, oval, convex, ſtriated on one ſide, and plane on the other.

Of this genus there is but one known ſpecies.

CICUTA. Long-leaved Water Hemlock.

The root is oblong, as thick as a man's thumb, and fibrated: the leaves ſtand on long pedicles, and are divided into a number of oblong, narrow, and ſerrated ſegments: the ſtalk is round, ſtriated, ramoſe, red at the bottom, and two or three feet high: the umbels are large, the flowers white.

It grows by waters with us, but happily is not common. Geſner calls it, Cicuta aquatica; Dodonæus, Sium alterum; Rivinus, Cicutaria. It is a terrible poiſon: Rivinus ſays cattle eat it unhurt, but Linnæus gives an inſtance of oxen killed by it.

ETHUSA.

THE general umbel is patent; the interior radii are gradually ſhorter, the middle ones ſhorteſt of all: the partial umbels are ſmall and patent: the partial involucra are dimidiated, placed exteriorly, and compoſed of either three or five leaves, which are very long, linear, and pendulous: the perianthium is very ſmall; the general corolla is uniform: the ſingle flowers conſiſt each of five unequal, inflexo-cordate petals: the ſtamina are five ſimple filaments; the antheræ are roundiſh: the germen ſtands under the cup: the ſtyles are two, and reflex: the ſtigmata are obtuſe: the fruit is naked, of a roundiſh, oval figure, and ſeparable into two parts: the ſeeds are two, roundiſh, ſtriated, and thence a third part plane.

Of this genus alſo there is only one known ſpecies. It is called, Cynapium and Cicuta fatua, by authors.

ETHUSA. Fools Parſley.

The root is oblong, white, and ſlender: the leaves are large, and formed of a multitude of pinnæ; the foliola are ſmall, oval, pointed, and ſerrated; the whole leaf much reſembles that of hemlock, but that the ſegments are narrower. The ſtalk is ſlender, round, ſtriated, ramoſe, and three feet high: the umbels are moderately large; the flowers white, and the ſeeds very large: the ſtalk is not ſpotted, like that of hemlock, but is often duſty.

It is common in gardens, and other cultivated places. C. Bauhine calls it, Cicutaria minor petroſelino ſimilis.

CORIANDRUM.

THE univerſal umbel has but few radii, the partial has ſeveral: the partial involucrum is compoſed of three linear leaves, placed outwardly, and the perianthium is quinquedentated: the general corolla is difform and radiated: the ſingle flowers of the diſk are hermaphrodites, and compoſed of five equal, inflexo-cordated petals: the ſingle flowers of the radius are hermaphrodite, and compoſed of five unequal, inflexo-cordate petals; the exterior one being very large, divided into two parts, and the lateral ones neareſt it having each one large, lateral ſegment: the ſtamina are five ſimple filaments; the antheræ are roundiſh; the germen ſtands under the cup: the ſtyles are two, and ſmall: the ſtigmata of the females are capitated: the fruit is naked, exactly

globoſe, and ſeparable into two parts: the ſeeds are two, hæmiſpheric and concave: the flowers of the diſk are often abortive.

Coriandrum fructibus globoſis. **Coriander.**

The root is oblong, ſlender, and white: the leaves are of two kinds; the radical ones are compoſed of broad, crenated pinnæ; thoſe on the ſtalk are divided into fine oblong and narrow ſegments. The ſtalk is round, ſtriated, ſlender, and two feet high, and ramoſe: the umbels are moderately large; the flowers reddiſh, ſometimes quite white.

It is a native of Germany, where it grows in corn-fields and by road-ſides; it is ſown in many places for the ſeeds. C. Bauhine calls it, Coriandrum majus. It's ſeeds are the Coriander ſeed of the ſhops, and are a pleaſant carminative.

Authors mention two other ſpecies of Coriander, a larger and a ſmaller, with teſticulated ſeeds, but they appear to be no more than accidental varieties of this common kind.

SCANDIX.

THE general umbel is long, but compoſed of only a few radii; the partial ones have more rays: the partial involucrum is formed of five leaves, of the length of the umbellule: the perianthium is ſcarce viſible; the general corolla is ſlightly difform: the flowers in the diſk are hermaphrodites; thoſe in the radius females; each conſiſts of five petals, of a cordato-inflex figure; the inner ones ſmaller, the outer one larger: the ſtamina are five capillary filaments; the antheræ are roundiſh: the germen is oblong; the ſtyles are two; they are ſubulated, erect, of the length of the ſmalleſt petals, and permanent: the ſtigmata are obtuſe: the fruit is naked, long, ſubulated, and ſeparable into two parts: the ſeeds are two, ſubulated, convex, and ſulcated on one ſide, and plane on the other: the flowers of the diſk are generally abortive.

This genus comprehends the Scandix, Cerefolium, Odorata, and ſome of the ſpecies of Myrrhis, of authors.

In the Scandix the ſeeds are filiform, and have a kernel included in their baſe. In the Cerefolium the ſeeds are ovato-ſubulated and ſtriated, the involucrum green and permanent, and the flowers all hermaphrodites. In the Odorata the ſeeds are angulated, the involucrum deciduous, the flowers of the diſk male, and thoſe of the radius hermaphrodite.

1. *Scandix ſeminibus roſtro longiſſimo.* **Shepherds Needle.**
The Scandix, with very long, roſtrated ſeeds.

The root is oblong, ſlender, fibrated, and ſweet to the taſte. The leaves are ſmall, and divided into a multitude of narrow, oblong ſegments; they ſtand on long pedicles. The ſtalks are round, firm, ſtriated, ramoſe, and about eight inches high. The flowers are ſmall and white; the fruit very long, and reſembling the beak of the cranes bills.

It is common in our corn-fields. C. Bauhine calls it, Scandix ſemine roſtrato; others, Pecten Veneris.

2. *Scandix ſeminibus hiſpidis.* **Rough-ſeeded, Wild Chervil.**
The rough-ſeeded Scandix.

The root is ſmall, oblong, and white. The leaves are pinnated and compoſite; the pinnæ are ſhort, broad, crenated, and hairy. The ſtalk is round, ſlender, ramoſe, and two feet high; it has a few thin, weak ſpines, or hairs, on it. The umbels are ſmall, the flowers white.

It is common with us under hedges. Rays calls it, Myrrhis ſylveſtris ſeminibus aſperis; Rivinus, Caucalis foliis cerefolii.

3. *Scandix seminibus nitidis ovato-subulatis*
The Scandix, with smooth, ovato-subulated seeds. **Chervil.**

The root is white, oblong, slender, and fibrated. The leaves resemble those of parsley, but that the pinnæ are smaller, and more divided. The stalk rises to four feet high; it is round, striated, hollow, and jointed at considerable distances. The umbels are large, the flowers small and white.

It is wild in many parts of Europe; with us it is cultivated for sallads. C. Bauhine calls it, Chærefolium sativum; Rivinus, simply, Cærefolium.

The other species are, 1. The great Cretic Scandix. 2. The very fine-leaved Scandix. 3. The long and smooth-seeded, wild Scandix. 4. The yellow-flowered, fine-leaved Scandix. 5. The fennel-leaved, rough-seeded Scandix. 6. The broad-leaved, reddish-flowered, rough Scandix. 7. The trifoliate, Canada Scandix.

CHÆROPHYLLUM.

THE general umbel is patent; the partial ones have nearly the same number of radii: their involucra are formed of hollow, lanceolated, reflex leaves, of the length of the umbellules, and from five to ten in number: the perianthium is scarce observable: the general corolla is nearly uniform: the single flowers consist of each five inflexo-cordate petals, of which the exterior are somewhat the larger: the stamina five simple filaments, of the length of the umbellule: the antheræ are roundish; the germen stands below the cup; the styles are two, and reflex; the stigmata are obtuse: the fruit is naked, ovato-oblong, acuminated, and separable into two parts: the seeds are two, oblong, attenuated at top, convex on one side, and plane on the other.

1. *Chærophyllum seminibus lævibus nitidis, petiolis ramiferis simplicibus.*
The Chærophyllum, with smooth, nitid seeds, and the ramiferous petioli simple. **Wild Cicely.**

The root is long, thick, and white: the leaves are large, and composed of a multitude of oblong, pointed, serrated pinnæ, of a pale green colour, a little hairy, and soft to the touch. The stalk grows to four feet high; it is thick, hollow, striated, and ramose. The umbels are large; the flowers small and white, the seeds are long, smooth, and black, when ripe.

It is common under hedges, Ray calls it, Myrrhis sylvestris seminibus lævibus; others, Myrrhis sylvestris.

2. *Chærophyllum caule maculato, geniculis tumidis.*
The spotted-stalked Chærophyllum, with tumid joints. **Wild Chervil.**

The root is long, white, and woody. The leaves are large, and stand on long pedicles; they are composed of a number of large, broad, and serrated pinnules, of a pale green colour, and hairy. The stalk rises to three feet high; it is hairy, and spotted with red, and tumid at the joints. The umbels are large, the flowers little and white.

It is frequent in most parts of Europe. C. Bauhine calls it, Chærophyllum sylvestre; Rivinus, Myrrhis.

SESELI.

THE general umbel is uncertain in figure; the partial umbels are very short, multiple, and almost round; their involucrum is composed of several leaves, of the length of the umbellule, narrow, and pointed: the perianthium is scarce observable: the general corolla is nearly uniform: the single flowers are composed each of five inflexo-cordate, and slightly unequal, petals: the stamina are five subulated filaments: the antheræ are simple: the germen stands under the receptacle: the styles are two, and reflex: the stigmata are obtuse: the fruit is naked, oval, small, striated, and separable into

into two parts: the ſeeds are two, oval, convex, and ſtriated on one ſide, and plane on the other.

1. *Seſeli foliis brevibus, ſegmentis brevibus linearibus.* Dutch Saxifrage.
The ſhort-leaved Seſeli, with ſhort, linear ſegments.

The root is oblong, ſlender, and yellowiſh, or white. The leaves are compoſed of a multitude of ſhort, narrow, linear ſegments; the top of the root is coronated with a tuft of hairy matter, from the fibres of decayed leaves. The ſtalk is ſlender, and ſcarce erect, ſtriated, a foot high, and furniſhed with a few leaves, finely divided, but ſmall. The umbels are moderately large, the flowers ſmall, ſometimes yellowiſh, often white.

It is common in Germany and Holland. Moriſon calls it, Saxifraga montana minor multifido folio; C. Bauhine, Daucus montanus multifido folio.

2. *Seſeli foliis longioribus, ſegmentis longiuſculis anguſtiſſimis.*
The longer-leaved Seſeli, with very narrow, long ſegments.

The root is long, ſlender, capillated at the top, black on the ſurface, and white within. The leaves are long, and divided into a multitude of long, and very narrow, ſegments, and are of a pale green colour. The ſtalk is round, ſlender, ſtriated, a foot and a half high, and ramoſe. The umbels are ſmall, the flowers white.

It is frequent in moſt parts of Europe. C. Bauhine calls it, Thapſia fœniculi folio.

The other ſpecies are, 1. The ſhort-leaved Seſeli, called broad-leaved Meum. 2. The long, glaucous-leaved Seſeli, called Mountain Saxifrage. 3. The large-leaved, yellow-flowered Seſeli.

IMPERATORIA.

THE general umbel is plane and multiple; the partial umbels are unequal: the partial involucra are of the length of the umbellule, and formed of ſeveral long, narrow leaves: the perianthium is ſcarce obſervable: the general corolla is uniform: the ſingle flowers are compoſed each of five inflexo-cordate, and nearly equal, petals: the ſtamina are five capillary filaments: the antheræ are roundiſh: the germen is placed under the perianthium: the ſtyles are two, and reflex: the ſtigmata are obtuſe: the fruit is naked, round, compreſſed, and ſeparable into two parts: the ſeeds are two, oval, furrowed with two lines on one ſide, and ſurrounded with a broad margin.

Of this genus there is only one known ſpecies.

IMPERATORIA. Maſterwort.

The root is thick, oblong, oblique, and rough on the ſurface, furniſhed with large fibres, and of an acrid, aromatic taſte, brown on the outſide, white within. The leaves are ternate, or three joined together, as ſo many lobes, on each pedicle, and each of them is again divided into three ſegments; they are large, of a deep green colour, and ſerrated at the edges. The ſtalk is round, ſtriated, jointed, ramoſe, and two or three feet high. The umbels are moderately large; the flowers white.

It is a native of the Apennines, and of ſeveral parts of Germany; we have it in gardens. Camerarius calls it, Magiſtrantia; C. Bauhine, Imperatoria major; Dodonæus, Aſtruthion.

It's root is a cordial and ſudorific, and is an ingredient in many compoſitions.

THE general umbel is uncertain in figure; the partial umbels are very short, multiple, and almoſt round; their involucrum is compoſed of ſeveral leaves, of the length of the umbellule, narrow, and pointed: the perianthium is ſcarce obſervable: the general corolla is nearly uniform: the ſingle flowers are compoſed each of five inflexo-cordate, and finely unequal, petals: the ſtamina are five tubulated filaments: the antheræ are ſimple: the germen ſtands under the receptacle: the ſtyles are two, and reflex: the ſtigmata are obtuſe: the fruit is naked, oval, ſmall, ſtriated, and ſeparable into

Claſs

Claſs the Fifth Order the Second.

Diviſion the Seventh.

Pentandria Digynia, with two naked ſeeds, and with no involucra.

THAPSIA.

THE general umbel is large, formed of about twenty radii, all nearly of equal length; the partial umbels conſiſt of as many nearly equal rays; neither have any involucra: the perianthium is ſcarce obſervable: the general corolla is uniform; the ſingle flowers conſiſt each of five crooked, lanceolated petals: the ſtamina are five capillary filaments, of the length of the corolla: the antheræ are ſimple; the germen is oblong, and placed under the cup: the ſtyles are two, and ſhort: the ſtigmata are obtuſe: the fruit is naked, oblong, ſurrounded longitudinally with a membrane, and ſeparable into two parts: the ſeeds are two, large, oblong, convex, pointed at each end, and have on each ſide a plane margin, large, and undivided, which is emarginated at top and bottom.

1. *Thapſia foliis lanuginoſis in ſegmenta linearia diviſis, umbellis latis.*
The Thapſia, with lanuginous leaves, divided into linear ſegments, with broad umbels.

The root is long and thick, coronated with a tuft of fibrous matter at top, blackiſh on the outſide, white within, and full of an acrid, milky juice. The leaves are large, divided into long, and ſomewhat broad, linear ſegments, pointed at the extremities, and of a pale green colour, covered with a light, downy matter. The ſtalk is round, ſtriated, jointed, and hollow: the umbels are very large, and the flowers yellow.

It is a native of Spain and Portugal. C. Bauhine calls it, Thapſia latifolia villoſa; others, Thapſia flore luteo, folio lato.

2. *Thapſia foliis glutinoſis, umbellis ſubgloboſis.*
The glutinous-leaved Thapſia, with ſubgloboſe umbels.

The root is oblong, very thick, brittle, blackiſh on the ſurface, white within, and full of a white, acrid juice. The leaves are large, and divided into ſomewhat broad ſegments, and are continually covered with a glutinous, liquid matter. The ſtalk riſes to two feet high; it is round, ſtriated, ſlender, and ramoſe: the umbels are moderately large, and arched, ſo that they approach to a globoſe figure: the flowers are yellow.

It is a native of Spain. C. Bauhine calls it, Thapſia foliis Libanotidis fœtidiſſima.

The other ſpecies are, 1. The ſmallage-leaved, ſtinking Thapſia. 2. The narrow-leaved Thapſia, called Panax aſclepium. 3. The Thapſia with very broad ſeeds. 4. The white-flowered, lucid-leaved Thapſia.

The roots of all the ſpecies are violently purgative, and unſafe medicines.

PASTINACA.

THE general umbel is multiple and plane; the partial umbel is multiple; neither has any involucrum: the general corolla is uniform: each flower conſiſts of five lanceolated, crooked petals: the perianthium is ſcarce obſervable: the ſtamina are five capillary filaments: the antheræ are roundiſh: the germen ſtands under the cup: the ſtyles are two, and reflex: the ſtigmata are obtuſe: the fruit is naked, compreſſo-plane, elliptic, and ſeparable into two parts: the ſeeds are two, elliptic, plane on each ſide, and ſurrounded with a margin.

1. *Paſtinaca foliis ſimpliciter pinnatis.*
The Paſtinaca, with ſimply pinnated leaves. **Parſnep.**

The root is oblong, white, and fibrated, of a ſweet taſte, and eſculent. The leaves are large, and pinnated; they conſiſt of a double ſeries of large, oval, acuminated pinnæ, ſerrated round the edges, ſet on a rib, terminated by an odd pinna at the end. The ſtalk is round, ſtriated, ramoſe, and jointed; it grows to three feet high. The umbels are large, the flowers yellow.

It is common about our road-ſides. C. Bauhine calls it, Paſtinaca ſylveſtris latifolia. Authors deſcribe the garden Parſnep as a different ſpecies, but it is evidently the ſame plant, altered only by culture.

2. *Paſtinaca foliis duplicato-pinnatis.* **Illyrian Coſtus.**
The duplicato-pinnate leaved Paſtinaca.

The root is long and thick, covered with a browniſh rind, and white within. The leaves are compoſed of a multitude of large, broad pinnæ; they reſemble the leaves of common Parſnep in ſhape, but they are larger, ſerrated at the edges, and hairy; the whole leaf is ſometimes two feet long, and a foot and a half broad. The ſtalk is very thick, round, ſtriated, hairy, and ramoſe; it grows to ſix feet high. The umbels are very large; the flowers yellow; the ſeeds large and flat.

It is a native of Italy and Germany. C. Bauhine calls it, Panax paſtinachæ folio; Tabernomontanus, Coſtum Illyricum.

It's root is greatly recommended in diſorders of the viſcera, but it is not uſed with us at preſent.

SMYRNIUM.

THE general umbel is unequal, growing larger as it ſtands; the partial umbels are erect; neither of them has any involucra: the general corolla is uniform: the perianthium is ſcarce viſible: the ſingle flowers conſiſt each of five lanceolated, lightly inflex petals: the ſtamina are five ſimple filaments, of the length of the corolla: the antheræ are ſimple: the germen ſtands below the cup: the ſtyles are two, and ſimple: the ſtigmata are two, and capitated: the fruit is naked, ſubgloboſe, ſtriated, and ſeparable into two parts: the ſeeds are two, bicaudated, convex on one ſide, with three ſtriæ, and plane on the other.

1. *Smyrnium foliis omnibus compoſitis.*
The Smyrnium. with all the leaves compoſite. **Alexanders.**

The root is very large, oblong, white, fibrated, and acrid. The leaves are compoſed of a number of pinnæ: the foliola are ſhort, roundiſh, large, and crenated at the edges; they ſomewhat reſemble the leaves of ſmallage, but that they are greatly larger. The ſtalk is round, ſtriated, ramoſe, and jointed very thick, and ſix or ſeven feet high. The flowers are of a greeniſh-white colour, the umbels very large.

It is a native of England, but is not common with us. C. Bauhine calls it, Hipposelinum, ſive Smyrnium.

2. *Smyrnium foliis caulinis ſimplicibus amplexicaulibus.*
The Smyrnium, with the leaves on the ſtalk ſimple, and ſurrounding it. **Candy Alexanders.**

The root is large, oblong, and white; the leaves are very large, and beautiful; they ſtand on long pedicles, and are themſelves a foot long, and three fourths of that in diameter, of a beautiful green colour, and compoſed of a number of ſhort, broad pinnules. The ſtalk is round, ſtriated, jointed, ramoſe, and grows to four feet, or more, in height. The leaves on the ſtalk are ſimple, roundiſh, ſmall, not more than an inch in diameter, of a yellowiſh green colour, and the ſtalk grows through them. The umbels are large, the flowers ſmall, and of a whitiſh-yellow.

It

It is a native of Crete, and of ſome of the ſouthern parts of Italy. C. Bauhine calls it, Smyrnium peregrinum rotundo folio.

ANETHUM.

THE general umbel is multiple; the partial one is alſo multiple, and neither has any involucrum: the perianthium is ſcarce viſible; the general corolla is uniform: the ſingle flowers conſiſt each of five lanceolated, crooked petals; the ſtamina are five capillary filaments; the antheræ are roundiſh: the germen ſtands under the cup; the ſtyles are two and ſmall; the ſtigmata obtuſe: the fruit is naked, ſuboval, compreſſed, and ſeparable into two parts: the ſeeds are two, ſuboval, convex, ſtriated on one ſide, and plane on the other.

This genus comprehends the Anethum and Fœniculum of authors. In the Anethum of authors, the ſeeds are ſurrounded with a membranaceous edge; in the Fœniculum, they have not this ſingular character. This is too little, however, to form a generical diſtinction, when all elſe agree.

1. *Anethum fructu compreſſo.* Dill.
The compreſſed-fruited Anethum.

The root is long, ſlender, annual, and white; the leaves are divided into a multitude of fine, long, narrow ſegments, like thoſe of fennel, but of a bluiſh-green colour, and leſs ſtrong ſmell. The ſtalk is round, ſtriated, ramoſe, and firm; it grows to four feet high: the umbels are moderately large; the flowers yellow.

It is a native of Spain; we cultivate it in gardens. C. Bauhine calls it, Anethum hortenſe; Dodonæus, Anethum.

2. *Anethum fructu ovato.* Sweet Fennel.
Oval-fruited Anethum.

The root is long, large, white, and fibrated; the leaves are divided into a multitude of long, narrow ſegments, and are of a dark green colour, and ſtrong ſmell: the ſtalk is round, thick, green, and four feet high: the umbels are large; the flowers yellow; the ſeeds broad, oval, of a pale colour, and ſweet taſte.

It is a native of the South of France. C. Bauhine and others call it, Fœniculum dulce. It's ſeeds are uſed as carminatives in the ſhops.

The other ſpecies of Anethum are, 1. The common, long-ſeeded Anethum, called Fennel. 2. The white-flowered, roundiſh-ſeeded Anethum. 3. The tortuous-ſtalked Anethum. 4. The tall, long-leaved Anethum. 5. The little, long-umbelled Anethum. 6. The roundiſh, umbelled, tall Anethum. 7. The little procumbent Anethum.

CARUM.

THE general umbel is long, and has ten radii often unequal; the partial umbels are cluſtered; neither has any involucra: the general corolla is uniform; the perianthia are ſcarce perceptible: the ſingle flowers conſiſt each of five, obtuſe, inflexo-cordate, and nearly equal petals: the ſtamina are five capillary filaments, of the length of the corolla; the antheræ are roundiſh, and very ſmall; the germen ſtands under the cup: the ſtyles are two, and very ſmall; the ſtigmata are ſimple: the fruit is naked, ovato-oblong, ſtriated, and ſeparable into two parts: the ſeeds are two, ovato-oblong, convex on one ſide, and ſtriated, ſmooth, and plane on the other.

Of this genus there is but one known ſpecies.

CARUM. Caraway.

The root is a foot long, as thick as a man's thumb, white, acrid, and fibrated. The leaves are placed on long pedicles, hollowed at the baſe; they are large, and compoſed of a multitude of pinnules placed at diſtances, ſmooth and ſerrated at the edges: the ſtalk is ſlender, but rigid, round, ſtriated, and ſomewhat ramoſe; it grows to a foot,

or

or more, in height: the umbels are moderately large; the flowers are white, with a caſt of reddiſh.

It is a native of many of the northern parts of Europe, and is cultivated in many other places, for the ſeed. C. Bauhine calls it, Cuminum pratenſe carvi officinarum; others ſimply, Carvi. The ſeeds are warm, carminative, and excellent in flatus's, and other complaints riſing from wind.

PIMPINELLA.

THE general umbel is compoſed of ſeveral radii, and the partial ones of yet more numerous; neither has any involucra. The general corolla is uniform; the perianthium is ſcarce viſible: the flowers conſiſt each of five inflexo-cordate and nearly equal petals: the ſtamina are five ſimple filaments, longer than the corolla: the antheræ are roundiſh; the germen ſtands under the cup: the ſtyles are two, and very ſhort; the ſtigmata are obtuſe; the fruit is naked, of an oblong, oval figure, and ſeparable into two parts: the ſeeds are two, oblong, narrower toward the point, convex, ſtriated on one ſide, and plane on the other.

1. *Pimpinella foliis ſubrotundis.* Burnet Saxifrage.
The roundiſh-leaved Pimpinella.

The root is white, very long, but ſlender, and acrid. The radical leaves are ſimply pinnated; they conſiſt of two ſeries of pinnæ, of a roundiſh figure, and duſky green colour, crenated round the edges, and arranged on the two ſides of a pedicle, terminated by a ſingle pinna. The ſtalk is ſlender, round, ſtriated, very ramoſe, and two feet high: the leaves on it are few, and thoſe divided into five long ſegments: the flowers are white; the umbels moderately large.

It is common in dry paſtures. C. Bauhine calls it, Pimpinella Saxifraga major altera; Tournefort, Tragoſelinum alterum majus. What the ſame authors and others deſcribe alſo, as another ſpecies, under the name of Pimpinella Saxifraga minor, and Tragoſelinum minus, is only a variety of this. The root is uſed as a diuretic and aperient, and is an ingredient in ſome compoſitions.

2. *Pimpinella foliis petiolatis ovatis.* Great Burnet Saxifrage.
The Pimpinella, with oval leaves on pedicles.

The root is oblong, white, thick, and acrid. The leaves are ſimply pinnated; each conſiſts of a double row of oblong, oval, leſſer leaves, ſerrated round the edges, and affixed, by moderately long pedicles, to a middle rib terminated by a ſingle one. The ſtalk is round, hollow, ſtriated, and three feet high: the umbels are large; the flowers white.

It is wild in England in many places. C. Bauhine calls it, Saxifraga major umbella candida.

ANISUM.

THE general umbel is thin and plano-patent; the partial ones are ſimilar; neither has any involucra: the perianthia are ſcarce obſervable: the general corolla is uniform; the ſingle flowers conſiſt each of five oval, inflex petals: the ſtamina are five ſimple filaments; the antheræ are roundiſh; the germen ſtands under the cup: the ſtyles are two, and reflex; the ſtigmata are obtuſe: the fruit is naked, of a roundiſh figure, ſtriated, and ſeparable into two parts: the ſeeds are two, roundiſh, convex, ſtriated on one ſide, and plane on the other.

1. *Aniſum foliis radicalibus ſimplicibus.* Aniſe.
Aniſum, with the radical leaves ſimple.

The root is oblong, ſlender, and white; the radical leaves ſtand on long pedicles, and are ſimple, ſmall, roundiſh, foliola, crenated at the extremities, ſmooth, of a pale green, and of a ſtrong ſmell: the ſtalk is round, hairy, ſtriated, ramoſe, and ſo weak,

weak, that it ſcarce is able to ſuppport itſelf erect; the leaves on it are narrower, and more deeply cut in all the edges: the umbels are very large; the flowers white.

It is a native of Egypt and Syria, and is ſown in Malta for the ſeed. C. Bauhine calls it, Aniſum herbariis; the Malteſe call it, Sweet Cummin. The ſeeds are an excellent carminative.

2. *Aniſum foliis radicalibus pinnatis.* Foreign Parſley.
The Aniſe, with the radical leaves pinnated.

The root is oblong, ſingle, white, and acrid; the leaves are moderately large and pinnated; they ſtand on long pedicles, and the pinnæ are ſmooth, rounded, or oval, and themſelves alſo ſupported on long pedicles: the ſtalk is round, firm, ſlender, ramoſe, and ſtriated, two feet high, and reddiſh at the bottom: the leaves on it are compoſed of longer, narrower, and more ſerrated pinnæ than the radical ones; the umbels hang down, before the flowers are ready to open, but then they become erect; the flowers are ſmall and white.

It is a native of Germany. C. Bauhine calls it, Apium peregrinum foliis ſubrotundis; Cluſius, Selinum peregrinum.

APIUM.

THE general umbel is compoſed of a great many rays; the partial umbel of fewer; they have neither of them any involucra. The perianthium is ſcarce viſible: the general corolla is uniform: the ſingle flowers conſiſt each of five roundiſh, inflex, equal petals: the ſtamina are five ſimple filaments; the antheræ are roundiſh: the germen ſtands under the cup; the ſtyles are two, and reflex; the ſtigmata are obtuſe. The fruit is naked, oval, ſtriated, and diviſible into two parts: the ſeeds are two, oval, ſtriated on one ſide, and plane on the other.

1. *Apium foliis caulinis linearibus.* Parſley.
The Apium, with the leaves on the ſtalk linear.

The root is oblong, large, and white. The radical leaves are placed on long pedicles; they are formed of moderately large, broad, and indented pinnæ, of a bright green, and ſmooth: the ſtalk is ſtriated, round, ramoſe, and jointed; it's leaves are greatly different from thoſe of the root, they are narrow and linear; the umbels are ſmall; the flowers white, and very ſmall.

It is a native of Italy and Spain; it is in all our gardens. C. Bauhine calls it, Apium hortenſe petroſelinum vulgo.

2. *Apium foliis caulinis cuneiformibus.* Small-age.
The Apium, with the leaves of the ſtalk cuneiform.

The root is long, thick, white, and fibrated: the radical leaves ſtand on pedicles of four or five inches long, hollowed, ſtriated, and reddiſh; they are compoſed of a number of pinnæ, broad, large, divided each into three principal ſegments, and ſerrated round the edges: the ſtalk is round, thick, deeply ſtriated, and hollow; the leaves on it ſtand on ſhort pedicles, and are cuneiform; at the top of the branches ſtand ſmall umbels; the flowers are ſmall and white.

It is common in our ditches. C. Bauhine calls it, Apium paluſtre; others, Eleoſelinum and Paludopium. This plant, by culture, becomes what we call Celeri, the bleached ſtalks of which are eaten at our tables.

ÆGOPODIUM.

THE general umbel is multiple and convex; the partial umbels are multiple and plane; neither has any involucra: the proper perianthium is ſcarce obſervable: the general corolla is uniform; the ſingle flowers conſiſt each of five oval, concave, and nearly equal petals: the ſtamina are five ſimple filaments; the antheræ are roundiſh: the germen ſtands under the cup; the ſtyles are two, ſimple, erect,

and of the length of the corollula; the ſtigmata are capitated: the fruit is naked, ovato-oblong, ſtriated, and ſeparable into two parts: the ſeeds are two, ovato-oblong, ſtriated, convex on one ſide, and plane on the other.

Ægopodium foliis caulinis, ſummis ternatis. **Gout-weed.**
The Ægopodium, with the upper leaves ternated.

The root is ſmall and creeping; the radical leaves reſemble thoſe of angelica; they are compoſed of a number of oblong and broad pinnæ, of a pale green colour, ſerrated about the edges, and ſtanding at diſtances from one another. The ſtalk is round, ſtriated, hollow, and ramoſe: the upper leaves on it conſiſt only of three lobes, or oblong leaves, like thoſe forming the radical ones: the umbels are moderately large, and convex; the flowers ſmall and white.

It is very common under hedges, and about gardens. C. Bauhine calls it, Angelica ſylveſtris minor, ſive Erratica.

Claſs the Fifth. Order the Third.

PENTANDRIA TRIGYNIA.

Plants which have in every flower five ſtamina and three ſtyles.

RHUS.

THE calyx is a perianthium, divided into five ſegments, acute, erect, and permanent: the corolla conſiſts of five petals, ovato-acuminate, erecto-patent, and twice as large as the cup; the ſtamina are five ſcarce viſible filaments; the antheræ are ſmall, and ſhorter than the corolla; the germen is roundiſh, and of the ſize of the corolla; the ſtyles are ſcarce viſible; the ſtigmata are three, cordated, and ſmall; the fruit is a berry, coriaceous, roundiſh, and having only one cell; the ſeed is ſingle, roundiſh, and oſſeous.

This genus comprehends the Rhus and Toxicodendron of Tournefort, and the Vernix of Kœmpfer. The Rhus has a hairy berry, and the kernel is globoſe. The Toxicodendron has the berry ſmooth, but ſtriated, and the nucleus compreſſed and ſulcated. The Vernix has the fructifications on different plants of the ſame ſpecies.

1. *Rhus foliis pinnatis ſerratis.* **Sumach.**
The pinnated, ſerrated-leaved Rhus.

This is a ſhrub growing to eight feet high. The root is large and brachiated; the trunk thick, and covered with a brown bark; the young ſhoots are covered with a paler bark, and are hairy. The leaves are compoſed of two ſeries, or rows, of pinnæ, placed along a middle rib, terminated at the extremity by an odd one; they are oblong, narrow, lightly ſerrated round the edges, and of a dark green colour. The ſpikes ſtand at the tops of the branches, long, thick, hoary, or tomentoſe, and the flowers are ſmall and purple.

It is a native of Braſil; we have it in our gardens. C. Bauhine calls it, Rhus anguſtifolium, and Sumach anguſtifolium. It's flowers and ſeeds are aſtringent.

2. *Rhus foliis ternatis, foliolis obverſe-cordatis ſeſſilibus.* **Trifoliate Sumach.**
The ternate-leaved Rhus, with obverſely-cordated, ſeſſile leaves.

The root is woody and fibrated. The ſhrub riſes to three, four, or five feet high: the trunk is covered with a brown bark; the young ſhoots are brittle, and covered with a paler bark. The leaves ſtand three on a ſtalk; they are placed each on a pedicle of an inch long, and are of a roundiſh, but ſomewhat cordated, figure, at the top, narrower at the bottom, of a deep ſhining green colour, and ſmooth. The flowers are very ſmall, and of a yellowiſh colour.

It is a native of Æthiopia. Commelin calls it, Vitex trifolia minor Indica rotundifolia; Plukenet, Rhus Africanum trifoliatum minus glabrum.

3. *Rhus*

3. *Rhus foliis ternatis, foliolis petiolatis, ovatis, acutis, pubeſcentibus, integris ſinuatiſque.* **Poiſon-Wood.**
The ternate-leaved Rhus, with oval, acute, hoary, petiolated leaves, entire and ſinuated.

This is a ſhrub of ſcarce more than three feet high. The root is woody and brachiated. The leaves ſtand three together, ſupported on long, ſmooth pedicles, and each has alſo it's own pedicle; they are of an oblong figure, broad, approaching to oval; but pointed at the end, uſually ſinuated, more or leſs deeply, but ſometimes entire, and always more or leſs hoary. The flowers are ſmall and whitiſh.

It is a native of Virginia. Tournefort calls it, Toxicodendron triphyllum folio ſinuato pubeſcente.

4. *Rhus foliis pinnatis integerrimis.* **The Verniſh Tree.**
The Rhus, with pinnated, undivided leaves.

The root is woody, brachiated and fibrated: the bark is a deep brown and ſmooth, on the younger branches often reddiſh. The leaves are compoſed of a double ſeries of oblong, pointed pinnæ, of a duſky green colour, ſmooth, and even at the edges. The flower is ſmall, the fruit rhomboidal: the whole abounds with a milky, poiſonous juice.

It is a native of China, and alſo of Virginia; we have it in our gardens. Plukenet calls it, Arbor Americana alatis foliis ſucco lacteo venenato; Kœmpfer calls it, Sitz vel Sitzdſin; verniſh is the produce of it.

The other ſpecies are, 1. The elm-leaved Rhus. 2. The broader-leaved Rhus. 3. The narrower-leaved Rhus, ſmooth on both ſides. 4. The ſmooth, trifoliate Rhus, or Toxicodendron.

COTINUS.

THE calyx is a ſhort perianthium, divided into five oval, obtuſe ſegments: the corolla conſiſts of five oval petals, ſcarce any larger than the cup: the ſtamina are five very minute filaments: the antheræ are ſmall; the germen is triquetrous; the ſtyles are three, and ſmall; the ſtigmata are obtuſe: the fruit is an oval berry, with only one cell; the ſeed is ſingle, and triangular.

Of this genus there is only one known ſpecies. Linnæus, in his late works, refers it to the Rhus, but it is ſufficiently diſtinct.

COTINUS.

This riſes to a ſmall tree. It's root is woody, brachiated, and fibrated: the trunk is covered with a brown bark. The leaves are roundiſh, or oval, and ſtand ſingly on long pedicles; they are an inch and a half long, and of a pale green colour; their pedicles are red, and, toward the end of ſummer, the leaves become red too. The tops of the branches ſuſtain a kind of tufts, formed of an infinite number of hairy, or cirrated, long, complex filaments, together forming a tuft of three or four inches in diameter, and of a purpliſh colour; the flowers ſtand in this, and are ſmall, and of a yellowiſh-green colour, the ſeeds reddiſh.

It is a native of Italy. J. Bauhine calls it, Cotinus, ſive Coccygria; C. Bauhine, Cocconilea, ſive Coccigrya.

CASSINE.

THE flowers form a decompound umbel: the perianthium is very ſmall, thick at the baſe, divided into five parts, obtuſe and permanent: the corolla is formed of a ſingle petal, divided into five ſuboval, obtuſe, patent ſegments, larger than the cup: the ſtamina are five ſubulated, patent filaments, ſhorter than the corolla: the antheræ are ſimple; the germen is conic; there is no ſtyle; the ſtigmata are three, reflex and obtuſe: the fruit is a roundiſh berry, with three cells; the ſeeds are ſingle and oval. Linnæus has, of late, joined the maurocenia to this genus; they are nearly allied, but have diſtinction enough to keep them properly ſeparate. Dillenius makes this ſhrub a ſpecies of phyllerea.

MAUROCENIA.

MAUROCENIA.

THE perianthium is ſmall, formed of one leaf, divided into five ſegments, and permanent: the corolla is formed of a ſingle petal, divided into five oval, patent ſegments: the ſtamina are five erect, ſubulated filaments, longer than the corolla: the antheræ are ſimple; the germen is conic; the ſtyles are not diſcernible: the ſtigmata are three, and gibbous: the fruit is an oval berry, umbilicated with the ſtigmata: the ſeeds are three, oblong, and ſcarce ſeparated by the pulp.

Dillenius makes this ſhrub a ſpecies of frangula.

VIBURNUM.

THE flowers are arranged into an umbel: the perianthium is ſmall, divided into five ſegments, and permanent: the corolla conſiſts of a ſingle petal, of a campanulated form, erecto-patent, divided into five ſegments at the edge, which are ſhort, obtuſe, and reflex, ſometimes cordated: the ſtamina are five ſubulated filaments, of the length of the corolla: the antheræ are roundiſh; the germen is roundiſh, and placed under the receptacle: there is no ſtyle, but, in it's place, a turbinated glandule: the ſtigmata are three, and obtuſe: the fruit is a roundiſh berry, with one cell: the ſeed is ſingle, oſſeous, compreſſed, and ſtriated.

This genus comprehends the Viburnum, Tinus, and Opulus of Linnæus's Genera Plantarum.

1. *Viburnum foliis cordatis, acute-crenatis, venoſis, ſubtus tomentoſis.* **The Wayfaring Tree.**

The Viburnum, with cordated, venous, acutely-crenated leaves, woolly underneath.

The root is creeping; the ſhrub is fifteen or twenty feet high, and very ramoſe; it's trunk is large, it's branches long and ſpreading. The leaves ſtand oppoſite, in pairs; they are two inches long, nearly as much broad, marked with large veins, deeply crenated round the edges, of a dark green colour on the upper ſide, and white and cottony underneath. The flowers ſtand in umbels, of three inches in diameter; they are moderately large, white, and of the ſmell of elder-flowers: the berries are black, compreſſed, of a ſweetiſh taſte, and viſcous.

It is common in our hedges. C. Bauhine calls it, Viburnum; others, Lantana.

2. *Viburnum foliis ovatis integerrimis.* **Laurustine.**

The Viburnum, with oval, undivided leaves.

This ſhrub grows to five or ſix feet high, and ſends out a multitude of branches. The root is woody and cirrated; the ſtem is covered with a ſmooth deep brown bark; the young ſhoots are ſomewhat quadrangular. The leaves are placed in pairs; they are two inches long, more than an inch broad, of a dark, but ſhining, green colour, and ſomewhat oval figure, thick and rigid, and even at the edges; they are green all the year. The flowers ſtand in umbels, of two inches in diameter; they are moderately large, white, with a tinge of red, and of a ſweet ſmell: the berries are compreſſed, and of a fine blue colour, when ripe.

It is a native of Italy; we have it very common in gardens. C. Bauhine and others call it Laurus ſylveſtris, and Tinus, but they make three ſpecies very improperly of it, from the variations in the ſize of the leaves; Cluſius ſet this on foot, and called them Tinus primus, Tinus ſecundus, and Tinus tertius; others, Tinus folio minore, &c.

3. *Viburnum foliis trilobis dentatis.* **Water Elder.**

The Viburnum, with trilobate, dentated leaves.

This is a weak ſhrub, of ſix or ſeven feet high. The ſtem is an inch or two in diameter; it's bark of a pale grey colour: the branches are long and weak, and uſually grow in pairs. The leaves are large, two inches and a half long, as much in breadth, and

and divided into three large, broad lobes; they are ſmooth, of a pale green colour, and ſoft to the touch. The flowers ſtand in large umbels; they are conſiderably large, and white.

It is common with us about waters. C. Bauhine calls it, Sambucus aquatica flore ſimplici; others, Opulus, and Opulus Ruellii.

This ſhrub, by culture, will produce double and globoſe flowers, and is then called the Gelder Roſe.

SAMBUCUS.

THE calyx is a perianthium, formed of one leaf, divided into five ſegments, ſmall and permanent: the corolla conſiſts of a ſingle petal, of a rotato-concave form, lightly divided into five reflex ſegments: the ſtamina are five ſubulated filaments, of the length of the corolla: the antheræ are roundiſh; the germen is oval, obtuſe, and placed under the receptacle: there is no ſtyle, but, in the place of it, a ventricoſe glandule: the ſtigmata are three, and obtuſe: the fruit is a roundiſh, unilocular berry; the ſeeds are three, convex on one ſide, and angular on the other.

1. *Sambucus caule arboreo ramoſo, floribus umbellatis.*
The branched, woody Sambucus, with umbellated flowers. **Elder.**

This grows to a ſhrub of eight or ten feet high, ſometimes more. The trunk is covered with a pale, whitiſh bark, cracked and uneven: the wood is white and firm: the young ſhoots are green, full of pith, and tender. The leaves are compoſed of four, ſix, or more, pinnæ, which are large, oblong, and ſerrated round the edges, of a deep green colour, and diſagreeable ſmell. The flowers are ſmall and white; they ſtand in very large umbels: the berries are black.

It is common in our hedges. C. Bauhine calls it, Sambucus fructu in umbella nigro; J. Bauhine, Sambucus vulgaris.

It varies ſometimes with laciniated leaves, ſometimes with white berries: authors have deſcribed theſe varieties as diſtinct ſpecies.

2. *Sambucus caule herbaceo ſimpliciſſimo.* **Dwarf Elder.**
The herbaceous, ſimple-ſtalked Sambucus.

This is merely an herbaceous plant, dying down to the ground every winter. It's root is long, creeping, and of the thickneſs of a man's finger. The ſtalk is ſimple and tender; it grows to three or four feet high, and is green, ſtriated, and thick, full of pith, and much like the green ſhoots of the common elder: the leaves alſo greatly reſemble thoſe of the elder, but they are compoſed of longer, and more deeply indented, pinnæ; there are three or four ſeries of theſe, fixed to the two ſides of a middle rib, with an odd one at the end: at the top ſtands an umbel of white flowers, very large and ſpreading. The berries are angular at firſt, but they grow round as they ripen. The leaves are of a very diſagreeable ſmell. The flowers have ſomewhat of the ſcent of apricot kernels.

It is common in watery places. C. Bauhine calls it, Sambucus humilis, ſive Ebulus; J. Bauhine, Ebulus, ſive Sambucus herbacea.

It is eſteemed a diuretic and aperient, and is ſometimes given in dropſies, jaundices, and obſtructions of the viſcera.

TAMARIX.

THE calyx is a perianthium, formed of one leaf, divided into five ſegments, obtuſe, erect, permanent, and of about half the length of the corolla: the corrolla conſiſts of five oval, hollow, obtuſe, and patent petals: the ſtamina are five filaments: the antheræ are roundiſh: the germen is acuminated: there is no ſtyle; the ſtigmata are three, oblong, revolute, and plumoſe: the fruit is an oblong, acuminated, triquetrous capſule, formed of three valves, containing only one cell, and longer than the cup: the ſeeds are numerous, very ſmall, and pappoſe. There is one ſpecies of this genus whoſe flower has ten ſtamina, all growing together at the baſe, and the alternate ones ſhorter.

Tamarix pedunculis nudis, floribus pentandribus.
The naked peduncled Tamarix, with five ſtamina in the flower. **Tamariſk.**

This uſually grows to but ten or twelve feet high, with the appearance of a ſhrub; ſometimes it is met with much taller, and with all the appearance of a tree. The bark of the trunk is pale brown, and rough; that of the young branches ſmooth and red. The leaves are very narrow, and ſomewhat reſemble thoſe of the cypreſs, but are of a paler green colour. The flowers ſtand in cluſters, at the extremities of the branches; they have long, ſlender, naked pedicles, and are ſmall, of a purpliſh colour on the outſide, before opened, but white within.

It is a native of France and Italy, and grows moſtly near the ſea. J. Bauhine calls it, Tamarix major, ſive Arborea Narbonenſis.

STAPHYLÆA.

THE calyx is a perianthium, divided into five roundiſh, hollow ſegments; it is nearly of the ſize of the flower, and is coloured: the corolla conſiſts of five oblong, erect petals, and much reſembles the cup: the ſtamina are five oblong, erect, filaments, of the length of the cup: the antheræ are ſimple: the germen is thick and tripartite: the ſtyles are three; they are ſimple, and a little longer than the ſtamina: the ſtigmata are obtuſe, and contiguous: the fruit is compoſed of three inflated, flaccid capſules, affixed together longitudinally, by a ſuture pointed at the tops, and opening on the inſides: the ſeeds are two, oſſeous, ſubgloboſe, with oblique points, and an orbicular hole at the ſide of the apex: in ſome ſpecies the ſtyles are only two, and then the fruit alſo conſiſts of only two capſules.

1. *Staphylæa foliis pinnatis.* **Bladder-nut.**
The pinnated-leaved Staphylæa.

This grows ſometimes to the height and bulk of a tree, more uſually it is a ſhrub, ten or fifteen feet high; it's bark is dark brown on the trunk; the young ſhoots are green, and have a large pith. The leaves are pinnated and large; two or three pair of oblong, large, pointed, and crenated pinnæ ſtand on a ſtalk, terminated by a ſingle one. The flowers grow, in a verticillate manner, round certain long, pendulous pedicles, the cluſters are at a diſtance from one another; they are ſmall, white with a caſt of reddiſh, before they open, and ſmell like thoſe of elder; the veſicles are long, large, inflated, and green.

It is a native of England, but not common with us; I have met with it in woods in Kent. J. Bauhine calls it, Staphylodendron; others, Nux veſicaria.

2. *Staphylæa foliis ternatis, ovato-acuminatis.* **Trifoliate Bladder-nut.**
The Staphylæa, with ternate, ovato-acuminated leaves.

The trunk is large, and covered with a brown bark; the branches are brittle, and greeniſh. The leaves ſtand on pedicles, three together; they are two or three inches long, broadeſt near the baſe, but running to a long point at the end, and of a pale green colour. The flowers are of a greeniſh-white colour, ſmall, and in cluſters; the fruit is very large, inflated, and of a browniſh colour.

It is a native of North America, and has been often ſent over from Penſylvania.

TURNERA.

THE calyx is a perianthium, formed of one leaf, of an infundibuliform ſhape, and deciduous: it's tube is cylindraceo-angulated, oblong, and erect: the limb is erect, and divided into five lanceolated ſegments, of the length of the tube: the corolla conſiſts of five petals, of an obverſely-cordated figure, with a point; they are plane, erecto-patent, and have narrow ungues inſerted into the tube: the ſtamina are five ſubulated filaments, of half the length of the corolla, and inſerted into the cup: the antheræ are acuminated and erect: the germen is conic; the ſtyles are three, filiform,

form, and of the length of the ſtamina: the ſtigma is capillaceo-multifide: the fruit is an oval capſule, with one cell, formed of three valves: the receptacles are linear, and are annexed longitudinally to the valves: the ſeeds are numerous, oblong, and obtuſe.

It is an American, deſcribed by Plumier.

TELEPHIUM.

THE perianthium conſiſts of five oblong, obtuſe, permanent leaves, of the length of the corolla: the corolla conſiſts of five erect, oblong, obtuſe petals, narroweſt at the baſe: the ſtamina are five ſubulated filaments, ſhorter than the corolla; the antheræ are incumbent; the germen is triquetrous and acute: there are no ſtyles, but the ſtigmata are three, acute and patent: the fruit is a ſhort, triquetrous capſule, formed of three valves, and having only one cell; the receptacle is free, and of about half the length of the capſule: the ſeeds are numerous and roundiſh.

Of this genus there is only one ſpecies; it is called by many authors a ſpecies of Ciſtus.

TELEPHIUM.

The root is three or four inches long, and as thick as one's finger, yellowiſh on the outſide, white within, hard, perennial, and furniſhed with a few long and thick fibres. The radical leaves are oblong and narrow; the ſtalks are numerous and procumbent, or, at beſt, but oblique; they are ſix or eight inches long, round, ſlender, and green: the leaves ſtand alternately on them; they are ſmall, of an oblong figure, approaching to an oval, about half an inch in length, and of a yellowiſh green. The flowers ſtand in long cluſters, at the extremities of the branches, and the ends of the cluſter turn back; they are white and ſmall.

It is a native of France. Imperatus calls it, Telephium legitimum; C. Bauhine, Telephium repens folio non deciduo. Moriſon makes it a ſpecies of polygonum. Authors have made other ſpecies out of the varieties of this plant, and have deſcribed ſome others as of this genus, which belong to others.

CORRIGIOLA.

THE perianthium conſiſts of five oval, concave, patent, permanent leaves, of the ſize of the corolla: the corolla conſiſts of five oval, patent petals: the ſtamina are five ſmall, ſimple filaments: the antheræ are ſimple; the germen is ovated and trigonal; there are no ſtyles; the ſtigmata are three, and obtuſe: there is no fruit but the calyx, which, cloſing, ſerves in the place of one: the ſeed is ſingle, and ovato-triquetrous.

Of this genus there is only one known ſpecies.

CORRIGIOLA.

The root is oblong and ſlender; the radical leaves are oblong, narrow, and pointed. The ſtalks are numerous and procumbent; they are four or five inches long, round, ſlender, and ramoſe; the leaves on theſe are ſhorter than the radical ones, and reſemble thoſe of the ſmaller knot-graſs; they ſtand cloſely and irregularly, and are of a bluiſh-green colour; at the tops of the ſtalks ſtand ſpiked, thick cluſters of flowers; they are ſmall, reddiſh, before they open, afterwards white; before the ſpikes have flowered all over, their ends are turned back.

It is a native of France and Germany. Ray calls it, Polygoni-folia per terram ſparſa flore ſcorpioidis; Parkinſon, Polygonum minus Monſpelienſe.

HOLOSTEUM.

THE perianthium is permanent, and compoſed of five leaves: the corolla is compoſed of five petals, broadeſt toward the ends, plane, patent, and tridentated: the ſtamina are five ſimple filaments: the antheræ are roundiſh; the germen is oval; the ſtyles are three, and repandous; the ſtigmata are ſimple: the fruit is a cylindraceo-conic capſule, with one cell; the receptacle is free, obſoletely trigonal, and has very ſhort hairs, which ſerve to fix the ſeeds: the ſeeds are numerous, and triquetrous: there is a ſpecies of this genus in which the ſtamina, and other parts, are only four, inſtead of five.

PHARNACEUM.

THE calyx is a perianthium, formed of five ſuboval, concave, patent, equal, and permanent leaves: there is no corolla, but the calyx reſembles one, being coloured on the inſide, and it's edges very thin: the ſtamina are five ſubulated filaments, of the length of the cup: the antheræ are bifid at the baſe; the germen is oval and trigonal; the ſtyles are three, and of the length of the ſtamina: the ſtigmata are obtuſe: the fruit is an oval capſule, obſcurely trigonal, in part covered by the cup; it is formed of three valves, and contains three cells: the ſeeds are numerous, nitid, orbiculated, depreſſed, and ſurrounded with a margin.

BASELLA.

THE Baſella has no calyx; the corolla is compoſed of a ſingle leaf, deeply divided into ſix ſegments, the two oppoſite ones being broader than the others, and, finally, it becomes baccated: the ſtamina are five ſlender filaments: the antheræ are ſmall; the germen is roundiſh; the ſtyles are three, and ſhort; the ſtigmata are ſimple; the ſeed is ſingle.

Theſe characters ſufficiently diſtinguiſh the Baſella from all the plants of this claſs, without a farther deſcription.

Claſs the Fifth. Order the Fourth.

PENTANDRIA TETRAGYNIA.

Plants which have in each flower five ſtamina and four ſtyles.

Of this Order there is only one Genus, and of that Genus only one known ſpecies.

PARNASSIA.

THE calyx is a perianthium, divided into five oblong, acute, patent, and permanent ſegments; the corolla conſiſts of five roundiſh, emarginated, ſtriated, hollowed, and patent petals; the nectaria are five; each is compoſed of a cordated ſquamma, hollowed, and furniſhed round it's edge with thirteen filaments, gradually taller, and each having a globular body at it's head: the ſtamina are five ſubulated filaments, of the length of the corolla: the antheræ are depreſſed and incumbent; the germen is oval and large; there are no ſtyles; the ſtigmata are four, obtuſe and permanent; the fruit is a capſule of a tetragono-oval figure, formed of four valves, containing one cell, and having a quadruple receptacle affixed to the valves; the ſeeds are numerous and oblong.

PARNASSIA.

The root is fibrous, of a reddiſh-white colour, and aſtringent, and of a ſomewhat acrid taſte: the radical leaves ſtand ſingly on long pedicles; they are roundiſh, cordated at the baſe, and terminate in a point, of a pale green colour, ſmooth, and about half an inch in diameter. The ſtalks are numerous; they are ſlender, angulated, and grow to ſix or ſeven inches high; each has one leaf, near it's bottom, ſurrounding it at the baſe, and like the radical ones; at it's top ſtands a ſingle, large, beautiful, white flower.

We have it in many boggy places in England. Tournefort calls it, Parnaſſia vulgaris et paluſtris; others, Gramen Parnaſſi.

Class the Fifth. Order the Fifth.

PENTANDRIA PENTAGYNIA.

Plants which have in every flower five stamina, and five styles, or stigmata.

ARALIA.

THE flowers of the Aralia are collected into an umbel of a globose figure, with a very small involucrum: the perianthium is very small, divided into five parts, and placed on the germen: the corolla consists of five ovato-acute, sessile, reflex petals: the stamina are five subulated filaments, of the length of the corolla: the antheræ are roundish; the germen is roundish; the styles are five, very short, and permanent; the stigmata are simple; the fruit is a roundish, coronated, striated berry, having five cells; the seeds are single, hard, and oblong.

Aralia caule folioso inermi. **Berry-bearing Angelica.**

The Aralia, with a weak, foliose stalk.

The root is whitish, a foot long, and an inch in diameter. The stalk is round, thick, jointed, ramose, of a purplish colour, oftener than green, filled with a white pith, and five or six feet high. The leaves are very large, and composed of a number of large, oval, and acuminated pinnæ, placed at distances, and are of a dusky green, and serrated at the edges. The umbels are small, and rise from the alæ of the leaves; the flowers are small, greenish at first, and afterwards white. The berries are large, red, and extremely sweet to the taste.

It is a native of North America. Tournefort calls it, Aralia Canadensis; Ray and others, Angelica baccifera.

BARRERIA.

THE calyx is a perianthium, formed of one leaf, of a turbinated figure, erect, divided into five slight segments at the edge, and permanent: the corolla is composed of five oval petals, with very long, filiform ungues: the stamina are five subulated filaments, longer than the cup: the antheræ are simple: the germen is rude, immersed in the cup, and quinquifid: the styles are five; they are filiform, and of the length of the stamina: the stigmata are obtuse.

STATICE.

THE common perianthium is of a very different figure in the different species: the proper perianthium is formed of one leaf, of an infundibuliform shape: the tube is narrow, the limb entire, not plicated: the corolla is infundibuliform; it is formed of five petals, narrow at the bottom, broad and obtuse at the top, and patent: the stamina are five subulated filaments, shorter than the corolla: the antheræ are incumbent: the germen is extremely small: the styles are five, filiform and distant: the stigmata are acute: there is no pericarpium: the cup becomes constringed about the neck, and it's limb is expanded; and in this state it retains the seed, which is single, very small, and roundish.

This genus comprehends the Statice and the Limonium of authors. The Statice of authors has a common triple cup, and the flowers are arranged into a roundish head. The Limonium of authors has a common, imbricated cup, and the flowers are arranged into oblong series. There is a species in which the corolla is monopetalous, but this is not a generical distinction; in the others the stamina adhere to the ungues of the petals.

1. *Statice caule nudo ſimpliciſſimo capitato.* **Thrift.**
The ſimple and naked ſtalked Statice, with a capitated head.

The root is thick, oblong, and fibrated. The radical leaves are three or four inches long, narrow, graſſy in appearance, and pointed at the ends; they are of a duſky green colour, and grow in great tufts. The ſtalks are numerous; they are round, five or ſix inches high, naked, and, at the top, have a roundiſh head, or cluſter of flowers, of the bigneſs of a nutmeg. The flowers are of a pale red colour, and moderately large.

It is common on our ſea-coaſts, and in ſome places ſufficiently diſtant from ſea; we have it alſo frequent in gardens. Tournefort and others call it, Statice; C. Bauhine, Caryophyllus maritimus, or Montanus flore globoſo; Moriſon, Limonium flore globoſo. It grows ſometimes larger, ſometimes ſmaller, and authors have very injudiciouſly made two ſpecies of it.

2. *Statice caule nudo ramoſo.* **Common Sea Lavender.**
The Statice, with a naked, ramoſe ſtalk.

The root is oblong, divaricated, and of a reddiſh colour. The radical leaves are two or three inches long, and an inch and a half broad, broadeſt in the middle, pointed at the end, and affixed to long pedicles. The ſtalk is round, robuſt, naked, ramoſe, and a foot, or more, in height; the ramifications of the top of it bend backward, and ſtand very ſeparate from one another; they are all along ornamented with a ſeries of flowers, of a beautiful pale blue colour, and ſmall.

It is very frequent on our ſea-coaſts. C. Bauhine calls it, Limonium maritimum majus; others, Limonium vulgatius.

3. *Statice foliis lanceolatis mucronatis radicalibus, caule ancipiti dichotomo, ſtipulis ſimplicibus.*
The lanceolated, mucronated, radical-leaved Statice, with ſtalks alated, and ſimple ſtipulæ.

The root is oblong, thick, and reddiſh; the leaves are numerous, oblong, of a bright green colour, large and broad, and terminate in a point that is rigid and prickly; they are in part erect, and in part lie on the ground. The ſtalk is round, ramoſe a foot high, and alated on each ſide by a ſtiff membrane. The flowers are very numerous, large, and form a kind of umbels; they are of a fine ſilvery white colour, with ſometimes a little tinge of blue among it; the whole cluſter of them, as there are uſually a great number together, makes an extremely beautiful appearance.

It is a native of Greece, and of ſome parts of Europe. Ray calls it, Limonium floſculis elegantiſſimis; Tournefort, Limonium orientale plantaginis folio floribus umbellatis. The common Limonium varies extremely in it's manner of growth, as well as ſize, and from theſe varieties many imaginary ſpecies have been made by too many authors, ſuch as Limonium minus, Limonium minimum, and the like.

The more certainly diſtinct ſpecies, beſide theſe, are, 1. The decurrent-leaved Statice, or Rawwolf's elegant Limonium. 2. The daiſy-leaved Statice. 3. The cordated-leaved Statice. 4. The aſplenium-leaved Statice. 5. The reticulated-leaved Statice. 6. The auricula-leaved Statice. 7. The hairy-leaved Statice. 8. The plantain-leaved Statice. 9. The multifid-leaved Statice. 10. The ſcorzonera-leaved Statice. 11. The ſhrubby, great-flowered, graſſy Statice. 12. The capillaceous-leaved Statice. 13. The baſil-leaved Statice. 14. The juniper-leaved Statice. 15. The purple, ſhort-ſtalked Statice. 16. The ſpiked, narrow-leaved Statice. 17. The ſhrubby Statice, with narrow, prickly leaves.

LINUM.

THE calyx is a permanent perianthium, formed of five ſmall, erect, acute, lanceolated leaves: the corolla is of an infundibuliform ſhape; it is compoſed of five oblong petals, broad and obtuſe at the top, large and patent: the ſtamina are five erect,

erect, ſubulated filaments, of the length of the cup: the antheræ are ſimple, and ſagittated; the germen is oval; the ſtyles are five, filiform, erect, and of the length of the ſtamina: the ſtigmata are ſimple and reflex: the fruit is a globoſe, ſomewhat pentagonal and, pointed capſule; it is formed of five valves, and contains ten cells: the ſeeds are ſingle, ovated, flattiſh, ſmooth, and pointed.

This genus comprehends the Linum, Radiola, Chamælinum, and Linocarpon of authors. In one of the ſpecies, the ſtamina and petals are only four. Authors have made a new genus of this; but, as every thing elſe agrees, this is not allowable.

1. *Linum foliis alternis lanceolatis integerrimis, calycibus acuminatis angulatis, capſulis mucronatis.* Flax.

The lanceolated, alternate-leaved Linum, with angular cups, and pointed capſules.

The root is oblong and ſlender; the ſtalk erect, round, hollow, ſimple, and three feet high, ſmooth, and divided at the top into three or four branches. The leaves ſtand cloſely and irregularly on it; they are two inches long, of the breadth of a ſtraw, and of a pale green, ſmooth even at the edges, and pointed at the ends: the flowers are large and blue.

It is cultivated in almoſt all parts of Europe. We meet with it alſo wild, or from ſeeds caſually dropped; and authors have made this another ſpecies, under the name of Linum ſylveſtre. Boerhaave alſo deſcribes what he calls a Linum ſativum humilius flore magno; and Tournefort, a Linum ſativum latifolium Africanum fructu majori, both which are varieties only of this ſpecies.

2. *Linum caule dichotomo, foliis ovato-lanceolatis, corollis acutis.* Purging Flax.

The dichotomous-ſtalked Linum, with ovato-lanceolate leaves, and acute corollæ.

The root is very ſmall, oblong, and woody; the ſtalks are procumbent at bottom, for two or three inches; thence they riſe erect, to ſix or ſeven inches high; they are very ſlender, round, and toward the top divided into many branches. The leaves are very ſmall, of an oval figure, but pointed at the ends; they have no pedicles, and are of a duſky green; the flowers ſtand ſingly on ſlender pedicles; they are moderately large and white.

The plant is common with us in dry paſtures. C. Bauhine calls it, Linum pratenſe floſculis exiguis; others, Linum catharticum. A decoction of the whole plant is a very rough purge, much uſed among the country people.

3. *Linum caule dichotomo, floribus tetrandris tetragynis.* The leaſt Rupture-wort, or All-ſeed.

The dichotomous-ſtalked Linum, with four ſtamina, and four piſtils in each flower.

The root is very ſmall and oblong; the ſtalk is round, ſlender, and very ramoſe: the plant grows to about an inch and a half high; the branches are uſually reddiſh; the leaves ſtand in pairs; they are extreamly ſmall, of a ſomewhat oval figure, and have no pedicles: the flowers are very minute, and white; the ſeed-veſſels large: the plant often expands into a kind of round tuft, and it's whole ſuperficies ſeems covered with flowers and ſeed-veſſels.

We have it in dry places not unfrequently. Ray calls it, Radiola vulgaris ſerpyllifolia; C. Bauhine, Polygonum minimum, ſive Millegrana minima; Vaillant; Chamælinum vulgare; Micheli, Linocarpum ſerpyllifolio multicaule.

The other ſpecies are, 1. The perennial, large-flowered Linum. 2. The ſmall-headed Linum. 3. The broad-leaved, hairy Linum. 4. The ſhrubby, white-flowered Linum. 5. The narrow-leaved, yellow-flowered Linum. 6. The roundiſh-leaved, yellow Linum. 7. The broad-leaved, yellow Linum, flowering at the joints. 8. The ſhrubby, yellow Linum. 9. The narrow-leaved, procumbent Linum.

numa 10. The rough-leaved, yellow Linum. 11. The rigid, aculeated-leaved, yellow, ſhrubby Linum. 12. The larix-leaved Linum. 13. The red-flowered, hairy Linum.

DROSERA.

THE calyx is a one-leaved perianthium, divided into five ſegments, erect, acute, and permanent: the corolla is infundibuliform; it is compoſed of five ſuboval, obtuſe petals, and is ſomewhat larger than the cup: the ſtamina are five ſubulated filaments, of the length of the cup: the antheræ are ſmall; the germen is roundiſh; the the ſtyles are five, ſimple, and of the length of the ſtamina; the ſtigmata are ſimple; the fruit is a ſuboval capſule, containing only one cell, and opening into five parts at the top; the ſeeds are numerous, very ſmall, and oval.

This genus comprehends the Ros ſolis, or Rorella of authors.

1. *Droſera ſcapis radicatis, foliis orbiculatis.* Sun-dew.
The radicated-ſtalked Droſera, with roundiſh leaves.

The root is ſmall and fibroſe; the leaves are roundiſh, a ſixth of an inch in diameter, ſometimes larger; uſually hollow, of a reddiſh colour, and affixed to long pedicles: the upper ſurface of the leaf is ſurrounded with long reddiſh filaments, and has ſome ſhorter in it's middle: the upper ſurface of the pedicle is alſo furniſhed with ſuch; the under ſide of both is ſmooth; there are drops of a clear fluid conſtantly ſtanding on the ſurfaces of theſe leaves in the hotteſt weather: the ſtalk is round, ſlender, naked, and three or four inches high: the flowers are moderately large and white; they ſtand in a long ſeries at the top of the ſtalk, all one way, and each on it's own ſeparate pedicle.

It is common in boggy places. C. Bauhine calls it, Ros ſolis folio rotundo.

2. *Droſera ſcapis radicatis, foliis oblongis.*
The Droſera, with radicated ſtalks, and oblong leaves.

The root is ſmall and fibrous; the ſtalk naked, ſix or eight inches high, and the flowers larger than in the former ſpecies, and of a beautiful white; they ſtand in a ſeries on the top of the ſtalk, and have ſhorter pedicles than thoſe of the former ſpecies. The leaves are an inch and a half long, including the pedicle, which by degrees dilates into the form of the leaf, and is covered, as in the former, with reddiſh hairs, and with drops of a clear fluid.

It is common on our bogs. C. Bauhine calls it, Ros ſolis folio oblongo. Authors have deſcribed other ſpecies, as they call them, alſo differing in ſize, under the names of larger and ſmaller Rorellæ. I have given the ſecond a place, as a diſtinct ſpecies, in complaiſance to Linnæus, who makes it ſuch, and who is not apt to ſwell the number of ſpecies unneceſſarily: but I am apt to ſuſpect, as he alſo ſeems to do, that it is only a variety of the common, round-leaved kind.

CRASSULA.

THE calyx is a perianthium, formed of five lanceolated, hollowed, acute, erect, and permanent leaves, which meet in ſuch a manner, as to form a kind of tube. The corolla is of the infundibuliform ſhape; it is compoſed of five petals, the ungues of which are very long, linear, ſtrait, connivent, and joined at their baſes, and the bracteæ, which form the limb, oval and reflexo-patent. The nectaria are five very ſmall, emarginated ſquammæ, annexed outwardly to the baſe of the germen: the ſtamina are five ſubulated filaments, of the length of the tube, and inſerted into the ungues of the corolla: the antheræ are ſimple; the germina are five, oblong, acuminated, and terminated by ſubulated ſtyles, of the length of the ſtamina; the ſtigmata are obtuſe: the fruit is compoſed of five oblong, acuminated, ſtrait, compreſſed capſules, opening longitudinally inwards: the ſeeds are numerous and ſmall. The corolla has ſometimes only four ſegments.

Craſſula

Craſſula caule dichotomo, foliis linearibus, floribus quadrifidis.
The dichotomous-ſtalked, linear-leaved Craſſula, with quadrifid flowers.

The root is compoſed of a multitude of white, moderately thick fibres; the ſtalks are round, thick, ſucculent, and often purpliſh; they are divided toward the tops into two, and theſe into two more each, and ſo on to the extremities, the diviſion always being thus: the leaves are very ſmall, narrow, and obtuſe; the flowers moderately large, and of a beautiful red.

It is frequent in France and Germany. Vaillant calls it, Sedum minimum annuum flore tetrapetalo.

SURIANA.

THE calyx is a permanent perianthium, compoſed of five lanceolated, acuminated leaves: the corolla conſiſts of five petals, obverſely ovate, patent, and of the length of the cup: the ſtamina are five filiform filaments, ſhorter than the corolla; the antheræ are ſimple: the germina are five, and roundiſh; the ſtyles are ſolitary, filiform, erect, of the length of the ſtamina, and inſerted into the middle of the interior ſide of the germen; the ſtigmata are obtuſe; there is no pericarpium, except the cruſts of the ſeeds: the ſeeds are five in number, and roundiſh.

It is a native of South America, and is deſcribed by Plumier.

SIBALDIA.

THE calyx is a permanent perianthium, compoſed of a ſingle leaf, ſlightly divided into ten ſegments, which are equal, patent, ſemi-lanceolate, and alternately narrower and broader: the corolla is ſmaller than the cup; it conſiſts of five oval petals, inſerted into the cup under it's ſegments: the ſtamina are five capillary filaments, inſerted into the cup, and ſhorter than the corolla; the antheræ are ſmall and obtuſe; the germina are five, oval and very ſhort; the ſtyles are of the length of the ſtamina, and ariſe from the ſides of the germen; the ſtigmata are capitated: there is no pericarpium. The cup cloſes at top, and in it's bottom holds the ſeeds, which are oblong, and five in number: the piſtils are ſometimes duplicate in the ſame plants, in which, in other flowers, they are quinate.

Sibaldia foliis tridentatis.
The tridentated-leaved Sibbaldia.

Trifid Pentaphylloides.

The root is woody, oblong, and perennial; the ſtalks are round, rigid, procumbent, and often get within the ſurface: the leaves ſtand in cluſters, about the tops of the ſtalks; they have each a brown, oblong, membranaceous baſe ſurrounding the ſtalk, ſemi-bifid and acute; from this diviſure grows a pedicle half an inch long, erect, ſlender, a little hairy, and at it's ſummit ſtand three leaves; theſe are vertically ovate, but with the apex cut off, hairy on both ſurfaces, a third of an inch in length, and terminated at the extremity by three acute denticulations: the flowers ſtand uſually four together, on a pedicle of half an inch long; they are yellow.

It is frequent in the North of England, and in Denmark, Sweden, and Lapland. Sibbald, from whom Linnæus has named it, calls it, Fragariæ ſylveſtri affinis planta flore luteo; Ray calls it, Pentaphylloides pumila foliis ternis trifidis.

Class the Fifth. Order the Sixth.

PENTANDRIA POLYGYNIA.

Plants which have in each flower five stamina, and very numerous styles.

Of this order there is only one genus, and of that but one known species.

MYOSUROS.

THE calyx is a deciduous perianthium, composed of five semi-lanceolate, obtuse, reflex, coloured leaves, joined on above the base: the corolla is considerably smaller than the calyx; it consists of five extreamly minute petals, and is tubulated at the base, and opens obliquely inwards: the stamina are five filaments, of the length of the cup; the antheræ are erect and oblong; the germina are very numerous, and are placed on the receptacle in form of a conic, oblong cluster; there are no styles: the stigmata are simple; there is no pericarpium: the receptacle is extreamly long, styliform, and covered with seeds, laid in an imbricated manner: the seeds are numerous, oblong, and acuminated.

This genus has a great affinity with the Ranunculus, but cannot be joined with it. The number of the stamina is not certain, but varies considerably in the different plants.

MYOSUROS. **Mouse-tail.**

The root is composed of a number of white, slender fibres; the leaves are very numerous, three inches long, very narrow, of a deep green, and somewhat broader toward the ends than at the base: the stalks are simple, two inches high, round, green, and slender: the flower is of a greenish colour; the antheræ are yellow: the receptacle is a green, cylindric body, two inches long, thicker than the stalk, and beautifully imbricated in it's structure.

It is common with us among corn, and in dry pastures. C. Bauhine calls it, Myosuros; Dodonæus, Cauda murina.

Class the Sixth.

HEXANDRIA.

Plants which have in every flower six stamina.

Of these some have only one style, some have two, some three, some four, some six, and some a great number in each flower; according to these distinguishing characters, they are to be arranged into six orders.

Order the First.

HEXANDRIA MONOGYNIA.

Plants which have in each flower six stamina, and only one style.

THE genera of this order are very numerous, and may be arranged, according to certain obvious and invariable distinctions, into five several divisions. Some of them having, 1. Calyculated flowers, divided into three segments. 2. Others having a monophyllous spatha. 3. Others having flowers composed of six petals, and naked. 4. Others having flowers consisting only of one petal, and naked; and, 5. Others having flowers not divided into three segments, yet having cups to them.

Class the Sixth. Order the First.

Division the First.

Hexandria Monogynia, having corollæ divided into three segments, and cups to them.

BROMELIA. Pine-apple.

THE calyx is a small trigonal perianthium, divided into three oval segments, placed on the germen, and permanent. The corolla consists of three narrow, lanceolate, erect petals, much longer than the cup: the nectarium is connivent, and affixed to every petal above it's base: the stamina are six subulated filaments, shorter than the corolla, and inserted into the cup: the antheræ are erect, and sagittated; the germen stands below the cup; the style is simple and filiform, of the length of the stamina; the stigma is obtuse and trifid: the fruit is a large, roundish, umbilicated berry: the seeds are numerous, incumbent, oblong, and obtuse.

This genus comprehends the Pinguin of Dillenius, the Ananas of Tournefort, and the Karotas of Plumier, the pine-apples of our stoves.

TILLANDSIA.

THE calyx is an oblong, tripartite, erect, permanent perianthium, formed of one leaf; the segments are oblong, lanceolated, and acuminated: the corolla is composed of a single petal, and is tubulated: the tube is long and ventricose; the limb is small, erect, trifid, and obtuse: the stamina are six filaments, of the length of the tube of the corolla, and adhere longitudinally to the petal: the antheræ are erect and acute, and are placed in the neck of the corolla: the germen is oblong, and pointed at each end; the style is filiform, and of the length of the stamina; the stigma is trifid and obtuse: the fruit is a long, obtusely, trigonal, acuminated capsule, formed of three valves, but containing only one cell: the seeds are numerous, and are affixed to a long capillary plume.

This genus comprehends the Caraguata of Plumier.

RENEALMIA.

THE calyx is a deciduous perianthium, composed of three coloured, oval, erect, hollow leaves: the corolla is long, erect, and of the infundibuliform kind; the tube is of the length of the calyx; the limb is short, plane, and divided into three segments: the stamina are six short membranaceous filaments, inserted into the corolla: the antheræ are sagittated; the germen is ovato-oblong, rounded, pointed at the end, marked with three furrows formed of three valves, and contains three cells. The seeds are numerous, oblong, and have each a capillary plume. It is a native of South America, described by Plumier.

BURMANNIA.

THE calyx is a perianthium, formed of a single leaf, long, cylindric, coloured, and edged longitudinally with a triple, membranaceous ala. The mouth is small, and divided into three segments: the corolla is very small; it consists of three extreamly minute, oval, oblong petals, placed in the mouth of the cup: the stamina are six scarce visible filaments: the antheræ are very short; they stand in the mouth of the cup, two together, and are crooked at the extremity: the germen is cylindric, and of about half the length of the cup; the style is filiform, and of the length of the corolla; the stigmata are three, obtuse and hollow: the pericarpium is an involuted capsule, of a cylindraceo-trigonal figure, formed of three valves, containing three cells, and opening at the angles: the seeds are numerous and small.

It is a native of Ceylon, and is figured in Burman's Thesaurus 20. 1.

TRADES-

TRADESCANTIA.

THE flowers are arranged into an irregular umbel, and have an irregular ſpathaceous involucrum. The perianthium is formed of three oval, concave, patent, permanent leaves: the corolla conſiſts of three petals; they are very large, orbiculated, plane, and patent; the ſtamina are ſix, filiform, hairy filaments, erect, and of the length of the cup; the antheræ are reniform: the germen is oval, and obtuſely trigonal; the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is trigonal and obtuſe. The fruit is an oval capſule, covered by the cup, formed of three valves, and containing three cells: the ſeeds are few in number, and angular.

Of this genus there is only one known ſpecies.

TRADESCANTIA. Virginian Spider-Wort.

The root is fibrous, and ſpreads every way under the ſurface. The radical leaves are very numerous; they grow in cluſters of three or four together, ſurrounding one another at the baſe; they are two feet long, and ſcarce half an inch broad, graſſy in appearance, and gradually growing ſmaller from the baſe to the point. The ſtalk is round, thick, green, jointed, and uſually ſimple, ſometimes ramoſe: the leaves ſtand ſingly at the joints, except at the top, where there grow two; from the center of theſe grows a cluſter of flowers, ten or fifteen in number. They are large, beautiful, and fading; their colour is a deep blue, ſometimes red, ſometimes white; the flowers that open in the morning cloſe and fade at night, but there is a long ſucceſſion of new ones.

It is a native of Virginia. C. Bauhine calls it, Allium ſive Moly Virginianum; others, Phalangium Virginianum, and Ephemerum Virginianum.

Claſs the Sixth. Order the Firſt.

Diviſion the Second.

Hexandria Monogynia, with a ſpatha compoſed of a ſingle leaf.

GALANTHUS.

THE calyx is an oblong, obtuſe, compreſſed ſpatha, opening on the flat ſide, and fading: the corolla conſiſts of three oblong, obtuſe, lax, hollow, patulous petals, equal in ſize: the nectarium is cylindric, and is formed of three parallel, obtuſe, emarginated leaves, of half the length of the petals: the ſtamina are ſix very ſhort, capillary filaments; the antheræ are oblong, acuminated, connivent, and terminate in ſetæ or hairs: the germen is globoſe, and placed under the cup; the ſtyle is filiform, and longer than the ſtamina; the ſtigma is ſimple: the fruit is a capſule of a globoſo-oval figure, obtuſely trigonal, formed of three valves, and containing three cells: the ſeeds are numerous and globoſe.

Of this genus there is only one known ſpecies, and this is uſually called Narciſſo-leucoium.

GALANTHUS. The Snow-Drop.

The root is a ſmall bulb, compoſed of a multitude of coats; the colour black on the outſide, but white within, and furniſhed with a multitude of fibres from the baſe: the ſtalk and leaves riſe from the root in a cluſter, ſurrounded to a conſiderable height, with a membrane; the ſtalk is ſlender, angular, hollow, green, and three or four inches high; two leaves accompany the ſtalk uſually, almoſt to it's top; they are narrow, long, graſſy, and of a bluiſh or greyiſh green; the top of the ſtalk furniſhes a drooping pedicle, on which hangs a large ſnow-white flower.

It is a native of the Alps and Apennines; we have it in our gardens almoſt every where, flowering early in ſpring. C. Bauhine calls it, Leucoium bulboſum trifolium minus; Lobel, Leuconarciſſo-lirion minimum; and Renealm, Erangelia.

LEUCOIUM.

THE calyx is an oblong, obtuſe ſpatha, compreſſed, burſting ſideways, and deciduous. The corolla is of a rounded ſhape, and patent, divided into ſix plain, oval petals, almoſt from the very baſe, and with their tops ſomewhat thicker and narrower than the middles. The ſtamina are ſix very ſhort, ſetaceous filaments: the antheræ are oblong, obtuſe, quadrangular, erect, and diſtant; the germen is roundiſh, and ſtands under the receptacle; the ſtyle is thickeſt upward and obtuſe; the ſtigma is ſetaceous, erect, acute, and longer than the ſtamina: the fruit is a turbinated capſule, formed of three valves, and containing three cells: the ſeeds are numerous and roundiſh.

Of this genus there is alſo only one ſpecies, and this is uſually diſtinguiſhed only from the former genus as another ſpecies, larger than that. Some have indeed obſerved the difference in the flower, but they have ſtill called it by the ſame name.

LEUCOIUM. The great Snow-Drop.

The root is a tunicated bulb, brown on the outſide, white within, and fibrated at the baſe. The leaves are ſix inches long, and a third of an inch broad, of a bright green, and of a gloſſy ſurface; there are uſually, from three to ſix of them, together: the ſtalk is ſix inches high, green, hollow, angular, and ſtriated; it is incloſed with the leaves in a membrane, to two inches high; it has no leaf on it, and has at it's top a long drooping pedicle ſometimes, but rarely two or three: the flower is large, and of a beautiful white, marked with a green ſpot externally: the antheræ are yellow.

It is a native of Italy and Germany; we have it in our gardens. C. Bauhine calls it, Leucoium bulboſum vulgare; Dodonæus, Leucoium bulboſum hexaphyllum.

NARCISSUS.

THE calyx is an oblong, obtuſe, compreſſed ſpatha, opening on one ſide, and deciduous. The corolla conſiſts of a nectarium, formed of one leaf, of a cylindric or infundibuliform ſhape, coloured at the top, and wide, curled and plicated at the mouth; and of ſix oval, acuminated, plane petals, affixed externally to the tube of the nectarium above it's baſe. The ſtamina are ſix ſubulated filaments, ſhorter than the nectarium; the antheræ are oblong: the germen is roundiſh, but obſcurely triquetrous, and ſtands under the cup: the ſtyle is filiform, and longer than the ſtamina; the ſtigma is trifid, hollow, and obtuſe. The fruit is a roundiſh, obtuſely, trigonal capſule, formed of three valves, and containing three cells, in which are a number of round, appendiculated ſeeds, with a columnar receptacle.

1. *Narciſſus ſcapo unifloro, nectarii limbo rotato reviſſimo.*

The ſingle-flowered Narciſſus, with the limb of the nectarium very ſhort and rotated.

Purple-rimmed Daffodil.

The root is a tunicated bulb, fibrated at the baſe; the leaves are twelve or fifteen inches long, half an inch broad, and of a pale bluiſh-green; the ſtalk is ſingle, naked, and fifteen inches high, green, flatted, angulated, ſtriated, and hollow; at it's top ſtands a ſingle flower, very fragant and beautiful; it is white, but the tubular part has a crimſon edge, below which is a white circle, and under that a yellow one.

It is a native of Italy, and ſome parts of France. C. Bauhine calls it, Narciſſus albus circulo purpureo; Dodonæus, Narciſſus medio-purpureus.

2. *Narciſſus ſcapo unifloro, nectarii limbo campanulato, erecto, petala equante.* **Wild Daffodil.**

The ſingle-flowered Narciſſus, with the limb of the nectarium campanulated, erect, and equal with the petals.

The root is a moderately large, tunicated bulb; the leaves are a foot long, a third of an inch broad, of a bluiſh-green colour, ſtriated, and ribbed on each ſide; four or five of theſe riſe with the ſtalk, and accompany it to the top, without ſeparating from it. The ſtalk is a foot high, green, hollow, ſtriated, and has at it's top a ſingle and very large flower, two inches long; the petals of a pale yellow colour; and the nectarium or tube very large, and of a gold colour.

It is a native of England. Dodonæus calls it, Narciſſus luteus ſylveſtris; others, Pſeudo-Narciſſus Anglicus.

3. *Narciſſus ſcapo multifloro, nectario campanulato, foliis planis enſiformibus.* **Many-flowered Daffodil.**

The many-flowered Narciſſus, with a campanulated nectarium, and plane enſiform leaves.

The root is a large, tunicated, and fibrated bulb, blackiſh on the outſide, and white within: the leaves are ten inches long, half an inch broad, flat, ſmooth, and edged like a ſword: the ſtalk is naked, hollow, green, ſtriated, and a foot high; at it's top ſtand ten or twelve flowers, moderately large, and of a diſagreeable ſmell: the petals are uſually white, ſometimes a little yellowiſh; the nectarium of a ſtrong yellow.

It is a native of the coaſts of Spain and Italy. C. Bauhine calls it, Narciſſus medioluteus copioſiore flore odore gravi.

4. *Narciſſus ſcapo multifloro, nectario campanulato, brevi, foliis ſubulatis.* **The Jonquille.**

The many-flowered Narciſſus, with a ſhort, campanulated nectarium, and ſubulated leaves.

The root is a tunicated bulb, brown on the outſide, white within, and fibrated: the leaves are a foot long; there uſually ariſe only two of them from the root: they are of the thickneſs of a ſmall packthread at the baſe, and gradually ſmaller to the point; they look round, but are, when examined, furrowed along the middle: the ſtalk is round, ſlender, a foot high, and green: the flower ſtands ſometimes ſingle; ſometimes there are two on the ſtalk, ſometimes more: the tube is long; the petals ſmall; the opening of the nectarium ſinuated; the whole flower is of a beautiful yellow, and a very ſweet ſmell.

It is a native of Spain and Italy. C. Bauhine calls it, Narciſſus juncifolius luteus minor.

The varieties of theſe four ſpecies of Narciſſus are almoſt innumerable; they are principally owing to culture, and conſiſt in the mutiplicity of petals, and ſize and colour of the corolla. Tournefort fills four or five pages, with the names of them, recounting them as ſpecies.

PANCRATIUM.

THE calyx is an oblong, obtuſe, compreſſed ſpatha, opening in the plane ſide, and deciduous: the nectarium of the corolla is formed of a ſingle leaf, of a cylindraceo-infundibuliform ſhape, coloured at top, and with an open mouth divided into ten ſegments: the petals are ſix, lanceolated and plane, and are inſerted externally into the tube of the nectarium above the baſe: the ſtamina are ſix ſubulated filaments, affixed to the apex of the nectarium; the antheræ are oblong and incumbent; the germen is obtuſely trigonal, and placed under the receptacle: the ſtyle is filiform, and ſomewhat longer than the ſtamina; the ſtigma is obtuſe; the fruit is a roundiſh, triquetrous

quetrous capſule, formed of three valves, and containing three cells: the ſeeds are numerous and globoſe; the receptacle is columnar. It is figured by Dillenius, Hort. Elth. 221.

AMARYLLIS.

THE calyx is an oblong, obtuſe, compreſſed, emarginated ſpatha, opening in the plane ſide, and deciduous: the corolla conſiſts of ſix lanceolated petals; the ſtamina are ſix ſubulated filaments: the antheræ are oblong, incumbent, and aſſurgent: the germen is roundiſh, ſulcated, and placed below the cup: the ſtyle is filiform, of the length and ſituation of the ſtamina; the ſtigma is trifid and ſlender: the fruit is an oval, or nearly oval, capſule, formed of three valves, containing three cells: the ſeeds are numerous: the inflexion of the petals, ſtamina, and piſtil, in this genus, is very different in the various ſpecies.

This genus comprehends the Lilionarciſſus of Tournefort and Dillenius.

1. *Amaryllis ſpatha multiflora, corollis revolutis, genitalibus ſtrictis.* The Guernſey Lilly.

The many-flowered Amaryllis, with revolute flowers, and cloſe ſtamina.

This is by far the moſt beautiful plant of it's genus, perhaps the moſt beautiful in the world. It's root is a large bulb; it's leaves are eight inches long, an inch broad, of a ſtrong bluiſh-green, and ſmooth; eight or ten of them grow in a cluſter, and they uſually droop their extremities toward the ground; the ſtalk riſes not in the midſt of theſe, but long before them, when the plant is of an age to flower: they only appear, after the ſtalk is faded; this is tender, green, and ſucculent, and is beautifully ſpotted with purple at the bottom: at it's top ſtands a cluſter of ten or twelve flowers; they are very large, and of a fine bright red, ſpangled, as it were, with gold-coloured ſpots, which, in the ſun, ſhine like burniſhed gold.

It is a native of Japan, but it thrives excellently wild in our iſland of Guernſey, where the roots were long ſince ſcattered by ſome accident, and whence we have been plentifully ſupplied ever ſince. Cornutus and others call it, Narciſſus Japonicus rutilo flore.

2. *Amaryllis ſpatha uniflora, corolla inequali, genitalibus declinatis.*

The ſingle-flowered Amaryllis, with an unequal corolla, and declinated ſtamina.

The root is a bulb of the ſize and figure of a ſmall onion, but blackiſh on the outſide; the leaves are thick, oblong, and narrow; the ſtalk is a foot high, uſually ſingle; ſometimes there are two from the ſame root; it grows to a foot high, and is roundiſh, ſucculent, and of a reddiſh colour: the ſpatha, while cloſed, is of a beautiful red; when it burſts, a ſingle flower appears. It is large, pendent, and of a bright red colour; the petals are diſpoſed three and three, and the middle one of the upper ſeries ſtands more erect than the reſt.

It is a native of Mexico. C. Bauhine calls it, Narciſſus Indicus totus ruber; others, Narciſſus Jacobæus flore ſanguineo.

The other ſpecies of the Amaryllis are, 1. The ſmall-flowered, red Amaryllis. 2. The great, round-headed Amaryllis, with numerous red flowers. 3. The dwarf, many-flowered, Indian Amaryllis. 4. The Jamaica Amaryllis, with red and yellow flowers. 5. The American, convallaria-leaved Amaryllis. 6. The little, ſingle-flowered, white Amaryllis. 7. The yellow, vernal Amaryllis. 8. The little, yellow, autumnal Amaryllis. Culture makes many varieties of one or other of theſe ſpecies, which are themſelves deſcribed as ſpecies by too many.

PONTEDERIA.

THE calyx is an oblong ſpatha, opening ſideways: the corolla is formed of a ſingle petal, divided into two parts, and ringent: the upper lip is ſtrait, plane, and it's top divided into three equal ſegments: the lower lip is reflex, divided into three parts, and theſe alſo equal: the ſtamina are ſix filaments, inſerted into the corolla; one of them is very ſhort, and two are longer than the other: the antheræ are incumbent; the germen is oblong, and placed above the receptacle; the ſtyle is ſimple, very ſhort, and declinate; the ſtigma is ſimple: the fruit is a fleſhy capſule, of an oval figure, ſomewhat triangular, marked with three furrows, and containing three cells: the ſeeds are numerous, and of a roundiſh figure.

It is a native both of the Eaſt and Weſt Indies, and is deſcribed by Houſton under the name of Michelia.

Claſs the Sixth. Order the Firſt.

Diviſion the Third.

Hexandria Monogynia, with naked flowers, conſiſting of ſix petals.

CRINUM.

THE calyx is a ſpathiform, general involucrum, compoſed of two oblong leaves, which bend downward, after it opens, and expoſe to ſight a kind of little umbel: the corolla is infundibuliform, and conſiſts of a ſingle petal; the tube is oblong, cylindric, and bent; the limb is divided into ſix lanceolato-linear, obtuſe, concave, reflex ſegments, three of which alternately are diſtinguiſhed by an uncinated appendage. The ſtamina are ſix ſubulated filaments, ariſing from the baſe of the limb; they are of the length of the limb, and connivent: the antheræ are oblong, linear, incumbent, and aſſurgent: the germen is placed in the bottom of the corolla; the ſtyle is ſubulated, and ſhorter than the ſtamina; the ſtigma is trifid, and very ſmall: the fruit is a capſule of a ſuboval figure, with three cells; the ſeeds are numerous.

Of this genus there is only one known ſpecies, and this has been uſually called a Lilioaſphodelus by authors.

CRINUM.

The root is a large tunicated bulb; the leaves are ſix or eight inches long, half an inch broad, and of a bluiſh-green, and remain green all the winter. The ſtalk is round, green, ſucculent, thick, naked, and near a foot high: the flowers are large and white, and ſtand ten or fifteen together in a cluſter, at the top of the ſtalk.

It is a native of America. Commelin calls it, Lilioaſphodelus Americanus ſempervirens minor albus. We have it in ſome of our gardens.

BULBOCODIUM.

THERE is no calyx; the corolla is of a funnel-like ſhape, and is formed of ſix petals. The ungues are very long and linear; the bracteæ are connected at the mouth, and the limb is erect and formed of the bracteæ, become of a lanceolated figure, and concave. The ſtamina are ſix ſubulated filaments, of but half the length of the limb; they are inſerted into the neck of the corolla: the antheræ are incumbent: the germen is in figure ovato-ſubulated, and obtuſely trigonal: the ſtyle is filiform, of the length of the ſtamina: the ſtigmata are three, oblong, erect, and furrowed: the fruit is a triangular, acuminated capſule, containing three cells: the ſeeds are numerous.

ALLIUM.

THE calyx is a common ſpatha, of a roundiſh figure, terminating in a long point, and deciduous: the corolla conſiſts of ſix oblong, narrow, comato-erect petals: the ſtamina are ſix ſubulated filaments, of the length of the corolla: the antheræ are oblong and erect; the germen is ſhort and trigonal, with a line on every angle: the ſtyle is ſimple; the ſtigma is acute: the fruit is a very ſhort, broad capſule, of a trilobated figure, conſiſting of three valves, and containing three cells: the ſeeds are numerous, and of a roundiſh figure.

This genus comprehends the Allium and the Moly of authors, and the Cepa and Porrum of Linnæus, in his Genera Plantarum.

1. *Allium caule planifolio bulbifero, radice compoſita, ſtaminibus tricuſpidatis.* **Common Garlick.**

The planifolious, bulbiferous-ſtalked Allium, with a compound root, and three-pointed ſtamina.

The root is a compoſite bulb, of the bigneſs of a hen's egg, formed of a number of ſmaller bulbs, ſurrounded by a common membrane, acrid to the taſte, and of a very ſtrong ſmell. The leaves are numerous, a foot and a half long, narrow and thin. The ſtalk is round, ſmooth, naked, hollow, and two or three feet high. The flowers are ſmall and whitiſh, but they ſtand in a very large cluſter, at the top of the ſtalk.

It is a native of Sicily; we have it in all our gardens. C. Bauhine and others call it, Allium ſativum. It's root is uſed in the ſhops as an aperient and diuretic; a ſyrup of it is excellent in aſthma's, and other diſorders of the breaſt, ariſing from a tough, viſcid phlegm.

2. *Allium ſcapo nudo, foliis lanceolato-ſeſſilibus, umbella faſtigiata.* **Yellow Moly.**

The naked-ſtalked, lanceolato-ſeſſile-leaved Allium, with a faſtigiated umbel.

The root is a bulb, ſometimes ſingle, ſometimes double, and reſembling that of an orchis. The leaves ſtand two together, ſurrounding one another at the baſe; they are ten inches long, an inch and a half broad, erect, firm, ſomewhat hollowed toward the baſe, of a bluiſh-green colour, and of the ſmell of garlick. The ſtalk is round, ſmooth, ſlender, but firm, and a foot, or more, in height. The flowers are ſmall, of a pale whitiſh-yellow on the outſide, and of a deep yellow within: each has it's ſeparate pedicle, an inch long, or more; and a cluſter of thirty, or more, of them, ſtand together, at the ſummit of the ſtalk, in a kind of globular form.

It is a native of Hungary, and of ſome parts of France. C. Bauhine calls it, Moly latifolium luteum odore allii.

3. *Allium ſcapo nudo, inferne ventricoſo, longiore, foliis teretibus.* **The Onion.**

The naked and ventricoſe-ſtalked Allium, with cylindric leaves.

The root is a large, tunicated bulb, acrid, and irregular in ſhape, ſometimes perfectly round, ſometimes oblong, ſometimes depreſſed. The leaves are a foot long, hollow, rounded, and of a ſtrong green colour. The ſtalk is naked, thick, ſtrait, and hollow; toward the middle it ſwells into a kind of belly, and is four or five feet high: at the top ſtands a large, round cluſter, of little, greeniſh, white flowers. Culture makes a vaſt number of varieties in this ſpecies, in the colour, ſhape, and taſte of the roots, &c. and theſe varieties have been deſcribed under the names of different ſpecies, but the plant is the ſame in all.

4. *Allium caule planifolio, umbellifero, radice tunicata, staminibus tricuspidatis.* The Leek.

The planifolious-stalked Allium, with a tunicated root, and tricuspidate stamina.

The root is a large bulb, compact, but tunicated, and fibrated at the bottom. The leaves are large, half an inch broad, and a foot long; they stand alternately on the young stalks, and surround them at the base; when the stalk grows higher, the leaves are narrower, and carinated. The stalk is thick, succulent, and three or four feet high; at the top stands a cluster of flowers, of the bigness of a man's fist; they are small, and of a purplish colour.

The Leek and Onion are both natives of Italy; we have them in all our kitchen gardens.

5. *Allium scapo nudo folia adæquante, foliis teretibus ventricosis.* The Long Onion.

The low, ventricose-leaved, naked-stalked Allium.

The length or roundness of the root we have already observed makes no specific distinction in the Onion; the root of this is, indeed, always oblong, but it has other more essential differences from the common kind. It's stalk is not above a foot and a half high, and the stamina, in it's flowers, are simple, not tricuspidate, as in the common Onion; it's leaves are hollow, and rounded; it's flowers whitish, with a tinge of purple; the root is sometimes white, sometimes reddish.

It is a native of Spain. C. Bauhine calls it, Cepa radice longa.

The other more singular species of this genus are, 1. The convoluted-stalked Allium, or Ophioscordon. 2. The smaller, rounded-headed Allium. 3. The leek-leaved Allium, with purple flowers. 4. The broad-leaved, wild Allium, called Ramsons. 5. The narrower, thin-leaved Allium. 6. The bicornate, wild Allium. 7. The striated-flowered Allium. 8. The rushy-leaved, yellow Allium. 9. The purple, Pyrenean Allium. 10. The narcissus-leaved Allium. 11. The long-rooted, mountain Allium. 12. The liliaceous Allium. 13. The purple, African Allium. 14. The narrow-leaved Allium, with yellow flowers. 15. The grassy Allium. 16. The crenated-leaved Allium. 17. The rush-leaved Allium, with a sweet smell. Of those called Onions and Leeks are, 1. The Ascalonic Allium, or Scallions. 2. The fissile Allium, or Chiboule. 3. The perennial sectile Allium, with rushy leaves. 4. The five-leaved, purple Allium. 5. The double-headed Allium. 6. The narrow-leaved, foliaceous-stalked Allium, called narrow Leek. 7. The purple, sweet-scented, oriental Allium.

LILIUM.

THERE is no calyx: the corolla has a narrow, campanulated base; from this proceed six erecto-incumbent petals, obtusely carinated at the base, growing gradually wider, and more patent, and with their extremities thick, obtuse, and reclinate: the nectarium is a longitudinal line in each petal, near the base: the stamina are six subulated, erect filaments, shorter than the corolla: the antheræ are oblong and incumbent: the germen is oblong, cylindric, and marked with six striæ: the style is cylindric, and of the length of the corolla: the stigma is thick and triangular: the fruit is an oblong capsule, furrowed with six deep lines; it's top is hollow, trigonal, and obtuse; it is composed of three valves; it contains three cells, and the seeds are very numerous, and stand in double rows; they are flat, and semiorbiculated externally: the nectarium in some species is plain, in others barbated; and the petals in some are intirely revolute, in others not.

1. *Lilium floribus ſparſis oblongis, corollis campanulatis, intus glabris.*
The ſparſed-flowered Lilium, with oblong, campanulated corollæ, ſmooth within.

The White Lily.

The root is bulbous, compoſite, and white. The ſtalk is very thick, four feet high, and full of leaves; theſe are oblong, moderately broad, ſmooth, and of a pale green colour: the flowers ſtand ſingly, on ſhort pedicles, forming a large cluſter at the top of the ſtalk; they are very large, of a ſnow-white colour, and very fragrant.

It is a native of Syria, where it is found plentifully wild in damp places; we have it in our gardens. C. Bauhine calls it, Lilium album flore erecto vulgare; others, only Lilium album. It's root and it's flowers have been eſteemed emollients externally uſed, but they are at preſent much neglected.

2. *Lilium foliis ſparſis, corollis campanulatis erectis, intus ſcabris.*
The ſparſed-leaved Lily, with erect, campanulated flowers, rough within.

Red Lily.

The root is a ſquammoſe bulb; the ſtalk is thick and round; it riſes to four or five feet high; the leaves ſtand leſs frequent on it than in the white Lily, and are narrower, oblong, rigid, and of a ſhining blackiſh-green colour. The flowers reſemble thoſe of the common white Lily, but are of a fine reddiſh-yellow colour, and ſcabrous within.

It is a native of Italy and Spain, and of Ruſſia; it is common in our gardens. C. Bauhine calls it, Lilium purpureo-croceum majus, and Lilium bulbiferum afterwards, as if of another ſpecies.

3. *Lilium foliis ſparſis, floribus reflexis, corollis revolutis.*
The ſparſed-leaved Lilium, with reflex flowers and revolute corollæ.

The root is a ſquammoſe bulb: the ſtalk riſes to two feet high. The leaves are oblong, and very narrow, of a pale green colour, rigid and nervous. The flowers are large; they ſtand in conſiderable cluſters, and are of a deep bloody purple; they hang downwards, and the petals turn back.

It is a native of Aſia; we have it in gardens. C. Bauhine calls it, Lilium floribus reflexis anguſtifolium; Cluſius, Lilium rubrum præcox.

The other ſpecies of the Lily are very numerous, and culture has made ſo many varieties from each, that the apparent number is much greater. The principal and more certainly diſtinct are, 1. The great, pendent-flowered, broad-leaved Lilium. 2. The plantain-leaved, bloody Lilium. 3. The hoary-leaved, bloody Lilium. 4. The great, nutant-flowered Lilium, called the great Martagon. 5. The hoary Martagon. 6. The bright, red, many-flowered Lilium. 7. The early, narrow-leaved Lilium. 8. The graſſy-leaved Lilium. 9. The yellow, nutant Lilium. 10. The broad-ſtalked, Syrian Lilium. 11. The long-ſpiked and reflex flowered Lilium. 12. The bright red, Byzantine Lilium. 13. The pyramidal, muſk Lilium. 14. The ſhort and very narrow-leaved Lilium.

FRITILLARIA.

THERE is no cup: the corolla is compoſed of ſix petals, and is of a campanulated form, with a broad baſe: the petals are oblong, and parallel: the nectarium is a cavity, hollowed near the baſe of every petal: the ſtamina are ſix ſubulated filaments, preſſing upon the ſtyle: the antheræ are quadrangular, oblong, and erect: the germen is oblong, trigonal, and obtuſe: the ſtyle is ſimple, and longer than the ſtamina: the ſtigma is triple, patent, and obtuſe: the fruit is an oblong, obtuſe, trilobate capſule, formed of three valves, and containing three cells: the ſeeds are numerous, plane, ſemiorbiculated externally, and placed in a double row.

This genus comprehends the Fritillary, Petilium, and Corona Imperialis of Tournefort, and the Liliofritillaria of Boerhaave. In the Fritillaria of authors the nectarium

is

is oblong, and the fruit ſmooth; in the Corona Imperialis the nectarium is hemiſpheric, and the fruit acutely emarginated.

1. *Fritillaria foliis omnibus alternis.* **Common Fritillary.**
The Fritillary, with all the leaves alternate.

The root is a ſolid bulb, white and ſucculent. The ſtalk is ſlender, round, purpliſh, and not very robuſt; the height about eight inches. The leaves are very narrow, long, carinated, and of a duſky green colour; they all ſtand alternately on the ſtalk, and there are uſually about ſix or ſeven of them on it. The flower is large, often ſingle, ſometimes two or three grow together: the pedicle is an inch long, ſlender and nutant: the flower is uſually beautifully checquered with ſquares of a dark purple, and of a pale red colour, but ſometimes it is white, or has a great deal of white in it.

It is a native of Germany and Sweden, and is frequent in our gardens. C. Bauhine calls it, Fritillaria præcox purpurea variegata; Dodonæus and Renealm, Meleagris.

2. *Fritillaria foliis imis oppoſitis.* **The little-flowered Fritillary.**
The Fritillaria, with the lower leaves in pairs.

The root is a large, ſolid bulb; the ſtalk is round, ſlender, erect, and a foot, or more, high: the leaves are narrow, long, and of a duſky green colour; there are fifteen or twenty of them on the ſtalk, and the lower ones ſtand in pairs, oppoſite to one another; the others alternate. The flowers are ſmall, and of a blackiſh purple colour, and the ends of them turn up: the three interior petals are narrower than the others, and the whole flower reſembles a bell.

It is a native of the Apennines. C. Bauhine and others call it, Fritillaria flore minore.

3. *Fritillaria racemo nudiuſculo, foliis obliquis.* **The Perſian Lily.**
The naked-cluſtered Fritillary, with oblique leaves.

The root is a large, round ſquammoſe bulb: the ſtalk riſes to three feet high, and is round, ſlender, and ſet full of leaves; theſe are oblong, very narrow, and of a duſky greyiſh-green; at the top of the ſtalk ſtands a long ſpike of flowers, each on it's ſeparate pedicle, an inch and a half, or more, in length; they are large, of a deep purple colour, and hang downward.

It is a native of the Eaſt, but is frequent in our gardens. C. Bauhine and others call it, Lilium Perſicum.

4. *Fritillaria racemo comoſo, inferne nudo.* **The Crown Imperial.**
The Fritillary, with a comoſe cluſter, naked at the bottom.

The root is a large, compreſſed, ſquammated bulb, of a whitiſh or reddiſh colour, and poiſonous ſmell. The ſtalk is round, ſtriated, thick, and three feet high. The leaves ſtand in cluſters on the lower part of the ſtalk; they are long, narrow, and ſeſſile, adhering by a broad baſe, and rendering the ſtalk angular, by running down it: from the top of this leafy part the ſtalk runs up naked, a foot, or more, high; it is ſlenderer, and not ſtriated, but ſpotted with purple. The flowers ſtand in a cluſter at the top, three, four, or more, together, on ſeparate pedicles, each with two narrow, little leaves at it's baſe; they are large, of a reddiſh yellow colour, and dependent.

It is a native of Perſia, but is frequent in our gardens. C. Bauhine and others call it, Corona imperialis; Linnæus, in his Hort. Cliffort. Petilium foliis lanceolatis; he then ſuppoſed it of a diſtinct genus from the Fritillary, but afterwards found it of the ſame.

The other ſpecies of Fritillary are numerous; their varieties owing to culture much more ſo. The more ſingular and certainly diſtinct are, 1. The large-flowered, autumnal Fritillary. 2. The little, yellow Fritillary. 3. The large, yellow Fritillary. 4. The greeniſh-yellow Fritillary. 5. The Fritillary, with umbellated flowers. 6. The branched, purple Fritillaries. Theſe are all called Fritillaries by authors. The Corona Imperialis is a ſingle ſpecies, though it's varieties deſcribed by authors under the name

of

of ſpecies, amount to more than twenty. Tournefort enumerates them; they conſiſt in the ſize and colour of the flower, and in the variegations of the leaves.

TULIPA.

THERE is no calyx: the corolla is of a campanulated form; it conſiſts of ſix petals, of an ovato-oblong form, concave and erect: the ſtamina are ſix ſhort, ſubulated filaments: the antheræ are quadrangular, oblong, erect, and diſtant: the germen is large, oblong, and trigonal, but approaching to a cylindric form: there is no ſtyle: the ſtigma is trilobate and triangular: the angles are protuberant, bifid, and permanent: the fruit is a triquetrous capſule, formed of three valves, and contains three cells; the valves are oval, and have a ciliated edge: the ſeeds are numerous, plane, and placed in a double ſeries; they are ſemicircular, and ſeparated by coniform flocci.

Of this genus there is but one known ſpecies, though infinitely varied by culture.

TULIPA. The Tulip.

The root is a moderately large bulb: the radical leaves are oblong, broad, thick, even at the edges, and of a greyiſh-green colour. The ſtalk riſes to a foot and a half high, and has uſually three leaves on it, like the radical ones, but ſmaller. The flower is ſingle, and ſtands erect on the ſummit of the ſtalk; it is large, and of a pale red colour.

This is the natural, original Tulip. It is a native of Greece, and has been introduced into our gardens about a hundred and ninety years, in which time five times as many varieties of it have been raiſed by culture, and a very conſiderable part of theſe deſcribed as diſtinct ſpecies by authors: Tournefort alone enumerates conſiderably more than a hundred of them as diſtinct plants. The judicious reader will not wonder that we have greatly reduced the ſuppoſed number of ſpecies in general in this work, when he ſees that more than a hundred are here neceſſarily ſtruck off at once: the varieties are very beautiful, but they ſhould be the deliciæ of gardeners, not of botaniſts.

ERYTHRONIUM.

THERE is no calyx: the corolla conſiſts of ſix oblong, lanceolated, acuminated petals, alternately incumbent on one another at the baſe, and, after gradually becoming wider, turning back from about the middle: the nectaria are two obtuſe, callous tubercles, adhering to the alternate, interior petals, at the baſe: the ſtamina are ſix ſubulated, very ſhort filaments: the antheræ are oblong: the germen is turbinated: the ſtyle is ſimple and ſtrait, ſhorter than the corolla, but longer than the ſtamina: the ſtigma is triple, patent, and obtuſe: the fruit is a capſule of a ſubgloboſe figure, narroweſt at the baſe, formed of three valves, and containing three cells: the ſeeds are numerous, and of an ovato-acuminated figure.

Of this genus there is only one known ſpecies.

ERYTHRONIUM. Dog's Tooth.

The root is two inches long, thickeſt at the bottom part, and ſmaller toward the top: the radical leaves are uſually only two, ſometimes three; they are oblong, broad, narrow at the baſe, and terminate in a point, ſometimes narrower, ſometimes, eſpecially when there is only a ſingle leaf, broader, and roundiſh; they are often four inches long, and an inch broad, of a deep green colour, and uſually ſpotted with purple. The ſtalk is ſingle, round, tender, reddiſh, naked, and three or four inches high. The flower is ſingle; it ſtands on the top of the ſtalk, and is moderately large, and either white or purpliſh.

It is a native of Spain, Italy, and Germany, and is frequent in our gardens. C. Bauhine calls it, Dens canis latiore folio, and deſcribes, as indeed moſt other authors have alſo done, a variety of it as a diſtinct ſpecies, under the name of Dens canis anguſtiore folio.

UVULARIA.

THERE is no calyx: the corolla conſiſts of ſix oblongo-lanceolate, acute, erect, and very long petals: the nectarium is an oblong cavity, formed toward the baſe of every petal: the ſtamina are ſix very ſhort, and broad, filaments: the antheræ are long, erect, and of half the length of the corolla: the germen is roundiſh: the ſtyle is ſingle, but ſemitrifid, filiform, and ſhorter than the ſtamina: the ſtigmata are ſimple and reflex: the fruit is an ovato-oblong, and ſomewhat triangular, capſule, containing three cells: the ſeeds are numerous, roundiſh, and compreſſed.

GLORIOSA.

THERE is no calyx: the corolla conſiſts of ſix oblongo-lanceolated, undulated, and very long petals, reflex to near the baſe: the ſtamina are ſix ſubulated filaments, patulous, and ſhorter than the corolla: the antheræ are incumbent; the germen is globoſe; the ſtyle is filiform, and longer than the ſtamina, and inclinated: the ſtigma is triple and obtuſe: the fruit is an oval, pellucid capſule, formed of three valves, and containing three cells: the ſeeds are numerous, globoſe, and diſpoſed in a double ſeries.

Tournefort has given this genus the name of Methonica, in the Memoirs of the Paris Academy, 1706.

ASPHODELUS.

THERE is no calyx; the corolla conſiſts of a ſingle petal, divided into ſix parts: the ſegments are lanceolated, plane, and patent: the nectarium conſiſts of ſix valvulæ very ſmall, inſerted into the baſe of the petal, and connivent, ſo as to form a globe: the ſtamina are ſix ſubulated, arcuated filaments; the three alternate ones ſhorter, and all inſerted into the valves of the nectarium: the antheræ are oblong, incumbent, and aſſurgent; the germen is roundiſh, and ſtands within the nectarium: the ſtyle is ſubulated, and ſtands on the ſtamina; the ſtigma is truncated: the fruit is a fleſhy capſule, of a globoſe figure, divided into three lobes, and containing three cells: the ſeeds are numerous, triangular, and gibbous on one ſide: the ſtamina are in ſome ſpecies declinated, in others bent outwards.

1. *Aſphodelus caule ſimplici folioſo, foliis trigonis fiſtuloſis.* **Yellow Aſphodel.**
The ſingle, leafy-ſtalked Aſphodelus, with trigonal, fiſtulous leaves.

The root conſiſts of a number of tuberoſities, oblong, thick, and yellow, furniſhed with many thick and ſtrong fibres. The radical leaves are long and narrow; the ſtalk grows to three feet high; the leaves ſtand very thick upon it, and are of a trigonal ſhape, and hollow; the flowers are moderately large and yellow, they ſtand in a long ſpike, reaching from the top almoſt to the bottom of the plant.

It is a native of Sicily; we have it in our gardens. C. Bauhine calls it, Aſphodelus luteus flore et radice.

2. *Aſphodelus caule nudo ramoſo, foliis ſtriatis, ſubulatis fiſtuloſis.* **Hollow-leaved Aſphodel.**
The naked, ramoſe-ſtalked Aſphodelus, with ſtriated, ſubulated, fiſtulous leaves.

The root is compoſed of a number of oblong tuberoſities; the radical leaves are very narrow, ſometimes round, ſometimes flatted on one ſide; they are pointed at the end, narrow, and ſomewhat rough to the touch: the ſtalk is ſmooth, branched, and has no leaves on it: the flowers are large, and the nectarium very obvious.

It is a native of Spain, France, and Italy. C. Bauhine calls it, Aſphodelus foliis fiſtuloſis.

The

The other more ſingular ſpecies are, 1. The great, white, ramoſe Aſphodel. 2. The little graſſy-leaved Aſphodel. 3. The patulous-ſtalked, compreſſed-leaved Aſphodelus. 4. The great-flowered, ſpiral, yellow Aſphodel. 5. The rough-leaved, patulous, yellow Aſphodel.

ANTHERICUM.

THERE is no calyx; the corolla conſiſts of ſix petals of an oblong, obtuſe figure, and very patent: the ſtamina are ſix ſubulated, erect, and very hairy filaments: the antheræ are ſmall, incumbent, and quadriſulcous; the germen is obſcurely trigonal; the ſtyle is ſimple, of the length of the ſtamina; the ſtigma is obtuſe and trigonal: the fruit is a ſmooth, oval, trigonal capſule, marked with three furrows, compoſed of three valves, and holding three cells; the ſeeds are numerous and angular. The hairineſs of the ſtamina is the great character.

1. *Anthericum foliis planis, caule ſimpliciſſimo.* **Single-ſtalked Spider-wort.**
The plane-leaved and ſimple-ſtalked Anthericum.

The root conſiſts of a multitude of long, thick, white fibres: the radical leaves ſtand in cluſters, ſurrounding one another at the baſe; they are narrow, long, pointed at the end, of a bright green, and ſtand erect. The ſtalk is round, ſmooth, ſucculent, and grows to a foot high, ſingle and ſtrait; at it's top ſtands a kind of ſpike of flowers, which are large and ſnow-white.

It is a native of the Pyrenæans; we have it in our gardens, where it grows larger, and varies ſo much, that it has been made into two or three other ſpecies. C. Bauhine calls it, Phalangium parvo flore, non ramoſum; Ray, Phalangium pulchrius, non ramoſum.

2. *Anthericum foliis planis, corollis planis deciduis.* **Branched Spider-wort.**
The plane-leaved Anthericum, with plane, deciduous flowers.

The root is compoſed of a multitude of thick fibres, white, and ſweetiſh to the taſte: the radical leaves are narrow, and a foot, or more, in length; they lie flat on the ground: the ſtalk is two feet, or more, in height, very ſlender, round, ſmooth, and ſucculent; the flowers ſtand on the ſeveral branches it divides itſelf into; at the top, they are large, and of a fine ſnow-white.

It is a native of Germany. C. Bauhine calls it, Phalangium parvo flore ramoſum.

The other more ſingular ſpecies are, 1. The great, lily-flowered Anthericum, called great Spider-wort. 2. The fiſtulous-leaved Anthericum. 3. The ſeſſile, pulpy-leaved Anthericum. 4. The ſtriated, fleſhy, ſubulated-leaved Anthericum. 5. The fleſhy, cylindric-leaved, ſtriated Anthericum. 6. The marſh, iris-leaved Anthericum. 7. The little Scottiſh, iris-leaved Anthericum. 8. The larger, acute-leaved Anthericum.

SCILLA.

THERE is no calyx; the corolla conſiſts of ſix oval, deciduous, and very patent petals: the ſtamina are ſix ſubulated filaments, of half the length of the corolla: the antheræ are oblong and incumbent: the germen is roundiſh; the ſtyle is ſimple, of the length of the ſtamina, and deciduous; the ſtigma is ſimple: the fruit is a ſmooth capſule, of a ſuboval figure, marked with three furrows, formed of three valves, and containing three cells: the ſeeds are numerous and roundiſh.

This genus comprehends the Liliohyacynthus of Tournefort, and the Hyacynthus Stellaris of Ray and others.

1. *Scilla radice tunicata.* **The Squill.**
The tunicated-rooted Scilla.

The root is a roundiſh, very large, tunicated bulb; the coats are very thick, and full of a ſlimy, acrid juice: the leaves are a foot and half long, and three or four inches broad,

broad, thick, juicy, and of a fine bright green. The ſtalk riſes to three feet high; it is green, ſucculent, ſlender, and round; the flowers ſtand in a long ſeries toward the top; they are ſmall and white.

It is a native of the ſea-coaſts of Spain and Italy. C. Bauhine calls it, Scilla vulgaris radice rubra; Cluſius, Scilla Hiſpanica. It's root is ſometimes reddiſh, ſometimes white, and hence ſome have made two ſpecies of it, a red and a white rooted ſquill. The root is uſed in medicine as an emetic and detergent; an oxymel is made of it in the ſhops.

2. *Scilla radice ſquammata corollis majoribus.* **The blue, ſtarry Hyacynth.**
The ſquammated-rooted Scilla, with large corollæ.

The root is a large, roundiſh bulb, formed of a number of thick ſquammæ, and reſembling that of the lily; the leaves are ten inches long, narrow, and of a bright green: the ſtalk is round, ſucculent, and green; the flowers large, and of a beautiful blue, ſometimes of a pale red, ſometime white, whence Tournefort has divided it into as many ſpecies.

It is a native of the Eaſt; we have it frequently in gardens. C. Bauhine calls it, Hyacynthus ſtellaris foliis et radice lilii; Tournefort, Liliohyacynthus flore 1. Cæruleo. 2 Albo. 3 Rubello.

ORNITHOGALUM.

THERE is no calyx, except a few vague fulcra are underſtood to be ſuch. The corolla conſiſts of ſix petals, of a lanceolated figure, from the baſe to the middle erect, from thence to the points plano-patent; they are permanent, but they loſe their colour: the ſtamina are ſix erect filaments, of an uncertain figure, of about half the length of the corolla; the antheræ are ſimple: the germen is angular; the ſtyle is ſubulated and permanent: the ſtigma is obtuſe: the fruit is a roundiſh, angulated capſule, formed of three valves, and containing three cells: the ſeeds are numerous and roundiſh; the receptacle columnar: the ſtamina are in ſome ſpecies plane, erect, trifid at the top, with the anthera on the middle ſegment.

1. *Ornithogalum ſcapo anguloſo diphyllo, pedunculis umbellatis ſimplicibus.* **Yellow Star of Bethlehem.**
The angular ſtalked, two-leaved Ornithogalum, with ſimple, umbellated peduncles.

The root is a ſmall fleſhy bulb, full of a viſcous juice. The radical leaves are uſually two; they are ſix inches long, half an inch broad, of a deep green, and ribbed longitudinally: the ſtalk riſes ſingle, angular, greeniſh, or reddiſh, and about four or five inches high, and toward it's top has uſually two leaves, ſmall and narrow near the top. The flowers ſtand on long pedicles, and form a kind of umbel; they are green on the outſide, with a rim of yellow, and are perfectly yellow within.

It is a native of Germany and Sweden. C. Bauhine calls it, Ornithogalum luteum; Dodonæus, Bulbus ſylveſtris.

2. *Ornithogalum ſcapo angulato diphyllo, pedunculis umbellatis ramoſis.*
The angular-ſtalked Ornithogalum, with two leaves, and ramoſe, umbellated peduncles.

The root is a round, ſolid bulb, not much larger than a pea; there uſually riſes from this a ſingle leaf, three or four inches in length, very narrow, and of a whitiſh green: the ſtalk is angular, very ſlender, about three inches high, and has uſually two leaves on it; at it's top it ſends off a number of peduncles, which ſubdivide into others, and theſe ſupport the flowers; they are ſmall, and of a purpliſh yellow without, of a pure yellow within.

It is a native of Spain and Italy. C. Bauhine calls it, Ornithogalum luteum minus.

The

The other ſpecies are, 1. The common, greeniſh, white Ornithogalum. 2. The great, white-ſpiked Ornithogalum. 3. The ſmaller-flowered, ſpiked Ornithogalum. 4. The great, broad-leaved Ornithogalum, with ſnow-white flowers. 5. The great, umbellated, Arabian Ornithogalum. 6. The common, umbellated Ornithogalum. 7. The bluiſh-white, umbellated-flowered Ornithogalum. 8. The very narrow-leaved, yellow Ornitholagum. 9. The ſingle, ruſhy-leaved Ornithogalum. 10. The comoſe Ornithogalum, with ſnow-white flowers. 11. The bifoliate, large, blue-flowered Ornithogalum. 12. The purple, ſtarry, autumnal Ornithogalum. 13. The blue, vernal, ſtarry Ornithogalum. 14. The great-ſpiked, bluiſh, ſtarry Ornithogalum. 15. The flower upon flower, Indian, purple, ſtarry Ornithogalum. 16. The Eriopherous, ſtarry, Indian Ornithogalum. Many of theſe ſpecies are called, by the generality of writers, ſtarry Hyacynths; they are moſt of them received into our gardens, and have afforded a multitude of varieties by culture, which Tournefort and two many others have given as ſo many diſtinct ſpecies, as the red-flowered, the white-flowered, the double-flowered, &c.

ASPARAGUS.

THERE is no calyx; the corolla is of an oblong, campanulated figure; it is compoſed of ſix petals, cohering at their tips; they are oblong, formed into a tube, and though three inner ones are alternately placed, and reflex at the extremities, they are all permanent: the ſtamina are ſix filiform capillaments, inſerted into the petals: they are erect, and of about half the length of the corolla; the antheræ are roundiſh: the germen is trigonal, of a turbinated form: the ſtyle is very ſhort; the ſtigma is a prominent point: the fruit is a globoſe berry, with an umbilicus, and contains three cells: the ſeeds are two in each, ſmooth, roundiſh, but internally angular: the figure of the corolla varies; it is ſometimes erect, ſometimes plane, ſometimes revolute. It may not improperly be called a monopetalous flower.

Aſparagus foliis ſetaceis, caule herbaceo. **Aſparagus.**
The ſetaceous-leaved Aſparagus, with an herbaceous ſtalk.

The root is compoſed of a multitude of long and thick fibres, ariſing from a ſmall tuberous head, and diſperſing themſelves every way: the ſtalk is at firſt thick, ſucculent, and tender; it afterwards grows ſlender and robuſt, hard, green, ſmooth, round, and very ramoſe: the leaves are very numerous, an inch in length, of a fine green, and ſcarce thicker than a thread: the flowers are ſmall and greeniſh; the berries large, and of a bright red. The plant grows to two feet and a half high, when wild; in gardens to much more.

It is a native of moſt parts of Europe in damp places, but it is greatly improved in the thickneſs and tenderneſs of it's eſculent ſhoots in gardens. C. Bauhine calls it, Aſparagus hortenſis et pratenſis. It's roots are an excellent diuretic, as indeed are alſo the ſhoots eaten at our tables.

The other ſpecies are, 1. The thick-leaved, herbaceous Aſparagus. 2. The herbaceous, prickly Aſparagus. 3. The prickly, woody Aſparagus. 4. The acute-leaved, ſpinoſe Aſparagus. 5. The great, prickly, Indian Aſparagus.

LEONTICE.

THE calyx is very ſmall and deciduous; it is compoſed of ſix little leaves: the corolla conſiſts of ſix petals, of an oval figure, narroweſt at the baſe; the three interior ones are alternately ſmaller: the ſtamina are ſix very ſhort filaments; the antheræ are erect, formed of two valves, divided into two cells, and open lengthwiſe from the baſe to the apex, where the two valves are united firmly: the germen is of an oblong, oval figure; there is no ſtyle: the ſtigma is obtuſe, and of the height of the ſtamina: the fruit is a large, globoſe, acuminated capſule, inflated, ſomewhat ſucculent, and containing only one cell: the ſeeds are numerous and globoſe.

1. *Leontice foliis tripartitis.*
The tripartite-leaved Leontice.

The root is tuberous, of the bigneſs of an orange, greyiſh on the outſide, green within, and covered with a multitude of protuberances. The radical leaves riſe to a foot, or more, in height: the pedicles are long, and are divided into three parts, on each of which there ſtand two or three leaves, of a roundiſh figure, ſome more, ſome leſs, indented and jagged round the edges; they are full of ribs, and of a bluiſh-green colour. The ſtalk is round, ſlender, green, and ſtriated with purple ſtreaks; it is divided into ſeveral branches toward the top: the leaves ſtand ſingly at their joints, and are ſmaller and leſs indented than the radical ones: the flowers ſtand in a kind of ſpikes at the tops of the branches; they are large and yellow, and each has it's ſeparate pedicle an inch long, uſually with a little leaf at it's baſe: the ſeeds are black.

It is a native of Italy. C. Bauhine and others call it, Leontopetalon.

There is only one ſpecies beſide of this genus, which will eaſily be diſtinguiſhed by it's name; it is the ſimple-leaved Leontice.

Claſs the Sixth. Order the Firſt.

Diviſion the Fourth.

Hexandria Monogynia, with flowers conſiſting of a ſingle petal, without any cup.

CONVALLARIA.

THERE is no calyx; the corolla is ſmooth, of a campanulated form, and compoſed of a ſingle petal, divided at the extremity into ſix ſhort, obtuſe, patentireflex ſegments. The ſtamina are ſix ſubulated filaments, inſerted into the petal, and ſhorter than it: the antheræ are oblong and erect; the germen is globoſe; the ſtyle is filiform, and longer than the ſtamina: the ſtigma is obtuſe and trigonal: the fruit is a globoſe berry, containing three cells, and is ſpotted, before it is ripe: the ſeeds are ſingle and roundiſh.

This genus comprehends the Lilium Convallium, the Polygonatum, and the Unifolium of authors. In all theſe the berry, before it is ripe, is ſpotted. In the Lilium Convallium, the corolla is globoſe, campanulated, and patent; in the Polygonatum, the corolla is tubulato-campanulated; in the Unifolium, a third part of all the fructifications is wanting: and, finally, ſome of the ſpecies of ſmilax of Tournefort are included in this genus, in which the corolla is divided into ſix very acute and patent ſegments.

1. *Convallaria ſcapo nudo.* **Lily of the Valley.**
The naked-ſtalked Convallaria.

The root is oblong, ſlender, and white, and creeps under the ſurface; from this riſe uſually two, ſometimes three, leaves; they are ſix inches long, two broad, and of a deep green; they are ſmall at the baſe, largeſt in the middle, and pointed at the end. The ſtalk is naked, ſlender, angulated, and ſix inches high; from it's middle to the top ſtand the flowers in a ſingle ſeries, placed one way, and dependent; they are ſmall, white, and of an extreamly fragrant ſmell.

It is a native of our woods, and is frequent alſo in gardens. C. Bauhine. &c. call it, Lilium Convallium.

2. *Convallaria foliis alternis floribus, ex alis.* **Solomon's Seal.**
The alternate-leaved Convallaria, with flowers from the alæ.

The root is oblong, white, creeping, jointed and fibrated. The ſtalk is round, green, ſlender, but firm, and two feet high; it is naked toward the bottom, but toward the top it bends downward, and is all along that part thick-ſet with alternate leaves,

leaves, two inches long, an inch broad, and nervous. The flowers are numerous, ſmall, oblong, tubular, and white; they have ſhort pedicles, ſometimes ſimple, ſometimes ramoſe.

It is a native of our woods. C. Bauhine calls it, Polygonatum latifolium vulgare. It varies extreamly in the ſize of the leaves and flowers, and theſe varieties have been deſcribed as diſtinct ſpecies, by authors, under the names of Polygonatum latifolium maximum, and Polygonatum latifolium flore majore odoro.

The root is a famous vulnerary, and is applied in form of a cataplaſm to contuſions.

3. *Convallaria foliis verticillatis.* **Narrow-leaved Solomon's Seal.**
The verticillate-leaved Convallaria.

The root is oblong, ſlender, white, and jointed; the ſtalk is angulated, ſlender, and a foot and half high: the leaves are ſmall and narrow; they ſtand four or five at a joint, ſurrounding the ſtalk in a verticillate manner, and are of a bluiſh-green, and ſmooth; the flowers ſtand round the ſtalks in the ſame manner, and are ſmall, and of a greeniſh-white.

It is a native of Sweden and Germany. C. Bauhine calls it, Polygonatum anguſtifolium; Dodonæus, Polygonatum alterum.

4. *Convallaria foliis cordatis* **One Blade.**
The cordated-leaved Convallaria.

The root is ſlender and creeping; the radical leaf is uſually ſingle, of a cordated form, three quarters of an inch long, half an inch broad, and placed on a ſlender pedicle of three or four inches in length: the ſtalk is ſlender, green, and four inches high, and has ſometimes only one, but more uſually two, ſometimes three leaves on it, like the radical one in figure, and hairy underneath; at the top ſtands a cluſter of little, white, ſweet-ſcented flowers.

It is a native of Germany, and many other parts of Europe. Gerard and Parkinſon pretend to have found it in England, but falſely. C. Bauhine calls it, Monophyllon ſive Lilium Convallium minus; others, Unifolium.

The other ſpecies are, 1. The ſingle-flowered, ſeſſile Convallaria. 2. The multiflorous Convallaria. 3. The hellebore-leaved Convallaria. 4. The dwarf, Engliſh Convallaria. 5. The bryony-leaved, American Convallaria. 6. The racemous Convallaria.

HYACINTHUS.

THERE is no calyx; the corolla is of a campanulated ſhape, and is formed of a ſingle petal: the limb is divided into ſix reflex ſegments; the nectarium conſiſts of three pores or cavities, filled with a honey juice, and ſituated at the top of the germen: the ſtamina are ſix ſhort, ſubulated filaments; the antheræ are connivent: the germen is roundiſh, but trigonal, and marked with three furrows: the ſtyle is ſimple, and ſhorter than the corolla; the ſtigma is obtuſe: the fruit is a roundiſh capſule, triquetrous, formed of three valves, and containing three cells: the ſeeds are roundiſh, uſually two in each cell; the receptacle is columnar.

This genus comprehends the Hyacinthus and Muſcari of authors: in the Hyacinth of authors, the corolla is oblong and tubulated; in the Muſcari, it is inflated and globoſe.

1. *Hyacinthus corollis infundibuliformibus ſemiſexifidis baſi ventricoſis.* **Oriental Hyacinth.**
The funnel-flowered Hyacinth, with the corolla ventricoſe, and divided into ſix ſegments.

The root is a large bulb, full of a viſcid juice: the radical leaves are ſix or eight in number; they are long, narrow, hollowed, and of a pale green at the baſe, and deeper toward the point. The ſtalk is round, thick, green, ſucculent, and eight inches, or more,

more, high. From the middle of this to the top ſtand the flowers in a kind of ſpike; they are large, and of a beautiful blue, and have each it's ſeparate pedicle, about half an inch long, and dependent.

It is a native of the Eaſt, but is common in our gardens, where culture has produced a multitude of varieties of it, all which Tournefort has named as ſpecies; too many of them, almoſt all the other writers.

2. *Hyacinthus corollis campanulatis ſexifidis.* Graſſy Hyacinth.
The campanulated-flowered Hyacinth.

The root is a large bulb; the radical leaves are ſeven inches long, graſſy, and of a deep green: the ſtalk is green, round, ſucculent, and naked; at it's top ſtands a ſpike of large blue flowers, not ventricoſe at the baſe, divided into ſix ſegments to the middle, and theſe not curled back.

It is a native of the Eaſt; we have it in gardens. C. Bauhine calls it, Hyacinthus cæruleo oblongo flore minor.

3. *Hyacinthus corollis globoſis.* Racemoſe Grape-flower.
The globoſe-flowered Hyacinth.

The root is a moderately large bulb, of an oblong figure; the radical leaves are ſix or eight in number, very narrow, eight inches long, ſtriated, ruſhy, carinated, and purpliſh toward the baſe, green in other parts: the ſtalk is ſix or eight inches high, round, thick, naked, and ſucculent: the bottom is uſually purpliſh; the middle green, and the top, where the flowers are, bluiſh: the flowers ſtand in a long cloſe ſpike, two inches, or more, in length; they are ſmall, globoſe, of a fine blue colour, and uſually whitiſh at the edges; the top of the ſpike has a kind of ramoſe figure, and every flower has it's own ſhort pedicle, and hangs pendent.

It is a native of Italy, but is frequent in our gardens. C. Bauhine calls it, Hyacinthus racemoſus cæruleus; Tournefort, Muſcari cæruleum majus.

4. *Hyacinthus corollis ovatis.* Muſk Hyacinth.
The oval-flowered Hyacinth.

The root is a large, white, tunicated bulb; the radical leaves are ſix or eight in number, long, very narrow, furrowed, thick, and ſucculent: the ſtalk is thick, round, tender, and ſucculent, eight or ten inches high, and loaded with flowers from the middle to the top; theſe are oblong, or oval, of a fine blue colour, and a perfumed ſmell.

It is a native of Auſtria, but is common in our gardens. C. Bauhine calls it, Hyacinthus racemoſus Moſchatus.

Theſe are the only four abſolutely diſtinct ſpecies of Hyacinth; but the varieties of them from culture are almoſt innumerable. Tournefort, taking theſe for ſpecies, has extended them to near a hundred. Linnæus, in his Fundamenta Botanica, allows but two diſtinct ſpecies of this genus; but ſince the publiſhing that work, he allows theſe four to be ſo.

POLYANTHES.

THERE is no calyx. The corolla is formed of one leaf, and is of an infundibuliform ſhape: the tube is oblong and crooked; the limb is patulous, and divided into ſix oval ſegments: the ſtamina are ſix thick, obtuſe filaments, ſituate in the opening of the corolla; the antheræ are linear, and longer than the filaments: the germen is roundiſh, and ſtands in the bottom of the corolla; the ſtyle is filiform, and ſhorter than the corolla; the ſtigma is trifid, thick, and covered with a honey-like juice: the fruit is a capſule of a roundiſh, but obtuſely trigonal, form, compoſed of three valves, containing three cells, and wrapped up in the baſe of the corolla: the ſeeds are numerous, ſemiorbicular, plane, and laid in a double ſeries. Heiſter has given this genus the name of Tuberoſa.

ALOE.

THERE is no calyx; the corolla is oblong, and formed of a ſingle petal, divided into ſix ſegments at the extremities: the tube is gibboſe; the limb ſtrait; the ſtamina are ſix ſubulated filaments, fully of the length of the corolla, and inſerted in the receptacle: the antheræ are oblong and incumbent; the germen is irregular in it's figure; the ſtyle is ſimple, and of the length of the ſtamina; the ſtigma is obtuſe and trifid: the fruit is an oblong, triſulcous capſule, formed of three valves, and containing three cells: the ſeeds are numerous and angular. The figure of the corolla in this genus is ſomewhat uncertain, but there are characters enough, beſide thoſe of that part, to diſtinguiſh it by.

1. *Aloe foliis anguſtis integris inermi-ſpinoſis.* **The Succotrine Aloe Plant.**
The Aloe, with narrow, entire, weakly ſpinoſe leaves.

The root is tuberous, and large, covered with a greyiſh bark, and full of a bitter juice: the leaves are numerous, and ſtand wide; they are a foot and half long, not more than two inches broad, and are thick, ſucculent, and of a deep green; they terminate in a long ſpine at the end, and are beſet round the edges with a multitude of weak, white ſpines. The ſtalk grows to near two feet high; it is round, ſmooth, ſucculent, and browniſh; there are ſome little leaves on it toward the top: the flowers are large, bending, and of a beautiful purple; they ſtand in a kind of thick ſpike, at the ſummit of the ſtalk.

It is a native of the iſland Socotora, and many other places. Breynius calls it, Aloe ſuccotrina anguſtifolia ſpinoſa flore purpureo; and Plukenet, Aloe ananæ folio floribus ſuave-rubentibus. The juice of the leaves of this plant depurated by ſtanding, and then dried in the ſun, is what is called Succotrine Aloes in the ſhops. An excellent cathartic in uſe on a multitude of occaſions.

2. *Aloe foliis ſpinoſis confertis dentatis vaginantibus planis maculatis.* **The Hepatic Aloe Plant.**
The cluſtered, thick, dentated, and prickly-leaved Aloe.

The root is a foot long, and two or three inches in diameter; the leaves are numerous, and ſtand in a circular manner; they are a foot and half long, three or four inches broad, and an inch, or more, thick; they terminate each in a ſpine, and are dentated at the edges, and all the denticulations terminate alſo in ſmaller ſpines; they are of a bluiſh-green colour, and ſeem as if duſty; the fleſhy ſubſtance is green, ſoft, ſucculent, and of a ſweetiſh taſte, but there run through it in all directions a number of veſſels, containing a yellow juice, of an intolerable bitterneſs. The ſtalk is round, ſmooth, three feet high, and uſually divided into two or three ramifications: the flowers ſtand in long ſeries; along the tops of theſe they are yellow, ſtreaked with green, an inch long, and pendulous.

It is a native of moſt parts of America, and of the Eaſt Indies. C. Bauhine calls it, Aloe vera vulgaris; others, Aloe vulgaris. The depurated juice of this plant, dried in the ſun, is what is called in the ſhops Hepatic Aloes; and the fæces of the ſame juice, dried, make the Caballine Aloes.

The other ſpecies of the Aloe are extreamly numerous; the more ſingular are, 1. The ſpinoſe, ribbed, African Aloe. 2. The American Aloe, with a very long ſpine at the end of the leaf. 3. The broad, glaucous-leaved Aloe. 4. The variegated-leaved Aloe, with a few ſhort ſpines. 5. The very robuſt, ſpined Aloe. 6. The very broad, ſhining-leaved Aloe. 7. The broad, lucid, ſerrated-leaved, ſpinoſe Aloe. 8. The dwarf, variegated Aloe of Ceylon. 9. The ſhort-leaved, ſpinoſe, African Aloe: Commelin has deſcribed this three times as three ſpecies. 10. The patulous, diſtichous, linguiform-leaved Aloe. 11. The very prickly, deep green-leaved Aloe. 12. The green-flowered, rhomboidal-leaved Aloe. 13. The oval, acuminated-leaved Aloe. 14. The triangular, viſcous-leaved Aloe. 15. The triangular-leaved, green and white Aloe.

YUCCA.

THERE is no calyx; the corolla is of a campanulated ſhape, and formed of ſix large, oval petals, cohering at their baſe; or of a ſingle petal, divided almoſt to the baſe into ſo many ſegments. The ſtamina are ſix very ſhort filaments, thickeſt at top, and reflex; the antheræ are ſmall; the germen is oblong, obtuſely triquetrous, and longer than the ſtamina; there is no ſtyle: the ſtigma is trifid, obtuſe, pervious, and each of the three ſegments is bifid: the fruit is an oblong, obtuſely triangular capſule, with three furrows; it is formed of three valves, and contains three cells: the ſeeds are numerous and incumbent, in a double order. The Yucca approaches very near to the aloe, but is abſolutely a diſtinct genus.

1. *Yucca foliis margine integerrimis.*
The Yucca, with even edges to the leaves. **The Indian Bread Plant.**

The root is tuberous and very large, divided into many portions, and covered with a reddiſh cruſt, or bark, but white within: the leaves ſtand in an orbicular manner; they are a foot and half long, three inches broad, and of a bluiſh-green colour: they are hard, tough, carinated, even at the edges, and terminate in a convoluted ſpine at the extremity. The ſtalk is round, thick, ſmooth, and grows to three or four feet high; toward the top it divides into a number of branches, and on theſe ſtand numerous, large, and beautiful flowers; they are white ſtreaked with purple.

It is a native of many parts of America. Ray calls it, Yucca Peruviana; C. Bauhine, Yucca foliis aloes. A kind of bread is made from the dried root of this plant by the Indians, which much reſembles that made from the root of the Caſſada.

2. *Yucca foliorum margine crenulato.*
The Yucca, with crenulated leaves.

The root is large, tuberous, and white; the leaves are two feet long, and three inches broad, ſucculent, thick, and ever-green: they are of a bluiſh-green, and very lightly crenated at the edges; they riſe in an oblique direction from the root, and often bend backwards at their ends: the ſtalk is round, ſmooth, ramoſe, and browniſh; the flowers are large, and of a pale fleſh colour.

It is a native of America; we have it in ſome of our ſtoves. C. Bauhine calls it, Draconi arbori affinis Americana.

AGAVE.

THERE is no calyx. The corolla is of a regular figure and erect, compoſed of a ſingle petal; the tube is long and gibbous; the limb is divided into ſix ſegments: the ſtamina are ſix ſubulated filaments, longer than the corolla: the antheræ are oblong and incumbent; the germen ſtands under the corolla: the ſtyle is ſimple, nearly of the length of the ſtamina: the ſtigma trifid and obtuſe: the fruit is an oblong capſule, marked with three furrows, formed of three valves, and containing three cells: the ſeeds are numerous, and of an angular figure.

Agave foliis ſpinoſo-dentatis mucronatiſque.
The Agave, with ſpinoſe, dentate, and mucronated leaves. **Great American Aloe.**

The root is very large, oblong, crooked, and, as it were, jointed. The leaves are five feet long, ſix inches broad, near the baſe, and two or three inches thick; they are hollowed, and of a bluiſh-green colour: the extremity terminates in a robuſt, brown ſpine, of two inches long; and the edges are beſet with ſpines of the ſame kind, only ſmaller, and bent downwards. The ſtalk is round, as thick as a man's arm, and fifteen feet high. The upper part of this ſtalk forms a ſpike of flowers ſix feet, or more, in length; the flowers are yellow, and ſtand in cluſters on peduncles, growing gradually ſhorter, in a regular and beautiful manner toward the top, ſo as to make the whole ſpike pyramidal.

It

It is a native of many of the warmer parts of America; we have it very common in our gardens, but it rarely flowers. It has been pretended only once in a hundred years; but this is as fabulous as the idle circumſtances recorded, as attending the opening of the flowers. C. Bauhine calls it, Aloe folio in oblongum mucronem abeunte; Cluſius, Aloe ex America.

HEMEROCALLIS.

THERE is no calyx; the corolla is of an infundibuliform figure; the tube is ſhort: the limb is patent, and divided into ſix ſomewhat reflex ſegments: the ſtamina are ſix ſubulated, declinated filaments, of the length of the corolla; the upper ones ſomewhat ſhorter than the others: the antheræ are oblong, incumbent, and aſſurgent; the germen is roundiſh and ſulcated: the ſtyle is filiform, of the length and ſituation of the ſtamina: the ſtigma is obtuſely trigonal and aſſurgent: the fruit is an ovato-trilobous, trigonal capſule, formed of three valves, and containing three cells: the ſeeds are numerous and roundiſh.

This genus comprehends the Lilioaſphodelus and the Liliaſtrum of Tournefort. In the Lilioaſphodelus, the germen ſtands within the receptacle of a monopetalous corolla; in the Liliaſtrum, the germen has the ſame ſituation in a corolla, more properly hexapetalous.

1. *Hemerocallis ſcapo ramoſo, corollis monopetalis majoribus.* The day Lily.
The large, monopetalous-flowered, ramoſe-ſtalked Hemerocallis.

The root is compoſed of a number of oblong, tuberous bodies, of a yellowiſh colour on the outſide, and white within: the leaves which ariſe immediately from it are eight inches long, three quarters of an inch broad, and of a bright green: the ſtalk is round, naked, thick, ſmooth, and grows to three feet high, and is divided into ſeveral ramifications toward the top: the flowers ſtand along theſe ramifications, and are of a duſky yellowiſh red; they are very large, and much reſemble thoſe of the red lily: the ſides of the petals are undulated and venous; the ſtyle is ſtriate.

It is a native of Hungary; we have it in our gardens. C. Bauhine calls it, Lilium rubrum aſphodeli radice.

2. *Hemerocallis ſcapo ramoſo, corollis monopetalis minoribus.* The yellow, day Lily.
The ſmaller, monopetalous-flowered Hemerocallis.

The root is tuberous and compoſite; the leaves are four or five inches long, and half an inch broad: the ſtalk is round, ſlender, ramoſe, and near two feet high: the flowers ſtand on the ramifications at the top, and are ſcarce half ſo large as thoſe of the former: the petals are neither undulated nor venous at the edges; and the colour is a fine bright yellow.

It is a native of Siberia, and many other places. C. Bauhine calls it, Lilium luteum aſphodeli radice; Tournefort, Lilioaſphodelus luteus.

3. *Hemerocallis ſcapo ſimplici, corollis hexapetalis.* Great, White Spiderwort.
The ſimple-ſtalked Hemerocallis, with hexapetalous flowers.

The root is compoſed of a great number of large, long, and thick filaments; the radical leaves ſtand in cluſters, and are long, narrow, of a deep green colour, and incloſe one another at the baſe: the ſtalk is round, thick, firm, green, and a foot, or more, in height: the flowers are numerous, large, and of a ſnow-white; their antheræ only yellow. They ſtand in a kind of ſpiked cluſter at the top of the ſtalk, and very much reſemble the flowers of the common white lily, except that they are ſmaller.

It is a native of the Alps, and of ſome parts of Germany. Tournefort calls it, Liliaſtrum flore majore albo; J. Bauhine, Phalangium flore lilii; and C. Bauhine, Phalangium magno flore.

Class the Sixth. Order the First.

Division the Fifth.

Hexandria Monogynia, with flowers not divided into three segments, and with cups to them.

ACORUS.

THE common receptacle of the fructifications is of the length and shape of a finger, and is covered with floscules. The corolla consists of six obtuse, hollow, lax petals, broadest at top, and, as it were, truncated: the stamina are six filaments, considerably thick, and a little longer than the corolla: the antheræ are thick, didymous, terminatory, and adnate: the germen is gibbous, oblong, and of the length of the stamina; there is no style: the stigma is a prominent point: the fruit is a short, triangular capsule, obtusely acuminated at each end, and contains three cells: the seeds are of an oblong, oval figure.

Of this genus there is only one known species.

ACORUS. Sweet Flag.

The root is oblong, thick, and jointed; the leaves are two feet long, narrow, compressed, smooth, of a bright green, and terminate in a point: at the base they are scarce so much as half an inch broad, and they grow gradually smaller. Among these there rises a single leaf, thicker and more robust than the rest, furrowed on the surface, and of a paler green; on this grows the spike of flowers: this is brown, and of a kind of checquered surface.

It grows in watery places in many parts of England. It's root is the Calamus aromaticus of the shops, though very falsely and improperly so called, there being another Calamus aromaticus described by medical writers, which is the stalk of a plant, and to which the name was originally given. The root of this plant is a stomachic and carminative, and is in frequent use.

HÆMANTHUS.

THE flowers are disposed in form of a kind of umbel; the involucrum is very large, and composed of six oblong, erect, permanent leaves: the corolla consists of a single, erect petal, divided into six erect, linear segments; the tube is very short and angular: the stamina are six subulated filaments, inserted into the tube of the corolla, and longer than the corolla; the antheræ are incumbent and oblong: the germen stands below the receptacle: the style is simple, and of the length of the stamina; the stigma is simple: the fruit is a roundish berry, containing three cells; the seeds are single and triquetrous: the involucrum has sometimes more than six leaves.

Hæmanthus foliis lanceolatis. The Guinea Orchis.
The lanceolated-leaved Hæmanthus.

The root is a single, moderately large, solid bulb, of a depressed figure, and furnished with fibres growing not from it's base, but from the top. The radical leaves are oblong, narrow, and pointed at the end: the stalk rises to a foot high; it is green, thick, succulent, and spotted: the leaves stand alternately on it, surrounding it at their bases; they are five inches long, not half an inch broad, and of a fine strong green: the flowers stand at the top in a kind of little umbel; they are large, very beautiful, and of a stellated appearance.

It is a native of Guinea, but we have it in our stoves. C. Bauhine, &c. call it, Orchis e Guinea.

APHYL-

APHYLLANTHES.

THE calyx is compoſed of a number of imbricated, lanceolated ſpathæ; the corolla conſiſts of ſix petals, of an obverſely oval figure, terminating at the baſe in very narrow ungues, and patent at the limb, forming a kind of tube below it. The ſtamina are ſix ſetaceous filaments, ſhorter than the corolla; the antheræ are oblong: the germen is trigonal, and turbinated; the ſtyle is filiform, and of the length of the ſtamina: the ſtigmata are three, and are oblong: the fruit is a turbinated capſule, of a triangular figure, and contains three cells; the ſeeds are oval.

Of this genus there is only one known ſpecies.

APHYLLANTHES.

The root conſiſts of a number of ſlender, hard, woody, long, and contorted fibres; the radical leaves are very numerous, two inches long, extremely narrow, and very quickly withering. The ſtalk is round, ſmooth, without a joint, or knot, naked, and tolerably firm; at it's top ſtands a ſingle and very beautiful blue flower, ariſing from a kind of compound, imbricated cup.

It is a native of France. C. Bauhine calls it, Caryophyllus cæruleus Monſpelienſium.

FLAGELLARIA.

THE calyx is a perianthium, divided into ſix ſegments: there is no corolla: the ſtamina are ſix capillary filaments: the antheræ are tumid; the germen is round; the ſtyle is moderately thick, and the ſtigma divided: the fruit is a roundiſh berry, containing a ſingle ſeed.

The perianthium and the fruit, with the want of a corolla, characteriſes this genus ſo ſufficiently, as to leave no neceſſity for a further deſcription.

JUNCUS.

THE calyx is a bivalve glume, ſometimes ſerving in common to many flowers, ſometimes peculiar to one only: the perianthium is compoſed of ſix oblong, acuminated, permanent leaves: there is no corolla, but the perianthium, when freſh and coloured, greatly imitates one: the ſtamina are ſix very ſhort, capillary filaments: the antheræ are oblong, erect, and of the length of the perianthium: the germen is triquetrous and acuminated: the ſtyle is ſhort and filiform: the ſtigmata are three, long, filiform, villoſe, and crooked: the fruit is a covered capſule, of a triquetrous figure, formed of three valves, containing only one cell, in which are a few round ſeeds.

1. *Juncus culmo nudo ſtricto capite laterali.* **Round-headed Rush.**
The naked, ſlender-ſtalked Juncus, with a lateral head.

The root is compoſed of a number of long and thick, brown fibres. The ſtalk riſes to two or three feet high; it is round, ſlender, and ſomewhat ſtriated, of a deep green colour, and filled with a very lax and ſpungy pith: three or four inches below the top burſts out the head, or cluſter of flowers; it is compact and cloſe, formed of a multitude of flowers, regularly arranged, and, when ripe, is of a pale brown colour.

It is common with us in wet places. C. Bauhine calls it, Juncus lævis panicula non ſparſa.

2. *Juncus culmo nudo ſtricto panicula laterali.* **Soft Rush.**
The naked, ſlender-ſtalked Juncus, with a lateral panicle.

The root is compoſed of a number of thick, brown fibres. The ſtalks grow to two or three feet high; they are ſmooth, naked, ſhining, ſoft to the touch, and are filled with a firm and compact pith: ſix or eight inches from their top burſt forth the flowers; they are formed into a lax panicle, not cluſtered into a head, as in the former, and are of a deep brown colour.

It is common about waters. C. Bauhine calls it, Juncus lævis panicula ſparſa major.

3. *Juncus foliis nodoso-articulatis.*
The Juncus, with nodoso-articulated leaves.

The root is a cluster of long, tough fibres, which spread every way under the surface. The stalk is nodose, somewhat compressed, fungous, ramose, and striated; it grows sometimes a foot and a half high, oftener only to four or five inches. The leaves stand singly at the joints; they are long, narrow, pointed at the extremities, and all the way beautifully articulated. The flowers grow five or six together, on short pedicles.

It is a native of England, and is common in boggy places. C. Bauhine calls it, Gramen junceum folio articulato aquaticum; J. Bauhine, Juncus foliaceus capsulis triquetris.

The other species of this genus are very numerous. The more singular are, 1. The pungent, or sharp-pointed Juncus. 2. The foliaceous Juncus, with a sparsed panicle. 3. The great, reflex-headed Juncus. 4. The small, trifid Juncus. 5. The psyllium-headed Juncus. 6. The broad-leaved Juncus. 7. The dwarf, erect Juncus. 8. The small, round-fruited Juncus. 9. The narrow, hairy, white-flowered Juncus. 10. The least foliaceous Juncus. Authors have divided these into what they call Rushes, and Rush-grasses, from their having, or wanting, leaves, but the fructifications are the same; whence this is a distinction of no foundation in nature.

RICHARDIA.

THE calyx is a perianthium, formed of one leaf, divided into six parts, erect, acuminated, and of about half the length of the corolla: the corolla is of a cylindraceo-infundibuliform shape; it is composed of a single petal: the limb is divided into six parts, erect and acute: the stamina are six scarce visible filaments: the antheræ are roundish, small, and placed in the divisions of the corolla: the germen stands below the receptacle: the style is filiform, of the length of the stamina, and divided into three parts at the top: the stigmata are obtuse: there is no pericarpium: the seeds are three, roundish, angular on one side, broadest upward, and gibbous.

It is an American, described by Houston.

BERBERIS.

THE calyx is a perianthium, formed of six oval, hollow leaves, narrow at the base, alternately smaller, coloured, and deciduous: the corolla consists of six roundish, hollow, erecto-patent petals, and is scarce any larger than the cup: the nectarium consists of two roundish, coloured corpuscules, adhering to the base of every petal: the stamina are six erect, compressed filaments: the antheræ are bifid and adnate: the germen is cylindric, aud of the length of the stamina: the style is not visible: the stigma is orbiculated, and broader than the germen: the fruit is a cylindric, obtuse, umbilicated berry, containing only one cell: the seeds are two, oblong, cylindric, and obtuse.

Berberis spinis triplicibus. The Berberry Bush.
The Berberis, with triple spines.

The root is multifid, woody, and yellow. The shrub is usually ten or twelve feet high, sometimes it is considerably more, and emulates the form of a tree: the spines are very sharp; they grow usually three or four from the same spot, and, with them, the leaves; they are of a pale green colour, an inch and a half long, more than an inch broad, narrow at the base, and grow gradually wider; they are serrated round the edges, and armed with weak spines. The flowers are small and yellow; they stand in long clusters, on pedicles: the berries are red.

It is wild with us in many places. C. Bauhine and others call it, Berberis dumetorum. It's root is an aperient; it's fruit a grateful, cooling acid.

CORDIA.

THE calyx is a perianthium, formed of a ſingle leaf, tubulated, tridentated, and permanent: the corolla is formed of a ſingle petal, of an infundibuliform ſhape: the tube is of the length of the cup: the limb is erecto-patent, and divided irregularly into four, five, or ſix ſegments: the ſtamina are a number of ſubulated filaments, equal to that of the ſegments of the corolla: the antheræ are ſimple, and of the length of the tube: the germen is roundiſh and acuminated: the ſtyle is ſimple, of the length of the ſtamina, and bifid; the two ſegments of it are alſo bifid: the ſtigmata are obtuſe: the fruit is a dry, globoſe, acuminated drupe, covered with the cup: the ſeed is a ſulcated nut, containing two cells.

It is an American, deſcribed by Plumier.

PRINOS.

THE calyx is a perianthium, formed of one leaf, lightly divided into ſix lobes, plane, ſmall, and permanent: the corolla conſiſts of a ſingle petal, and is of a rotated form: there is no tube: the limb is plane, and is divided into ſix oval ſegments: the ſtamina are ſix erect, ſubulated filaments, ſhorter than the corolla: the antheræ are oblong and obtuſe: the germen is oval, and terminates in a ſtyle ſhorter than the ſtamina: the ſtigma is obtuſe: the fruit is a roundiſh berry, much larger than the cup, and containing ſix cells: the ſeeds are ſingle, oſſeous, obtuſe, convex on one ſide, and angulated on the other.

It is an American, figured by Plukenet, 452. 1.

LORANTHUS.

THE perianthium of the fruit is a hollow and undivided rim: the perianthium of the flower is an undivided, hollow margin, crowning the germen: the corolla is formed of a ſingle leaf, and is of a ſexangular figure, and divided into ſix nearly equal, linear, revolute ſegments: the ſtamina are ſix ſubulated filaments, alternately ſhorter, but about the length of the corolla: the germen is roundiſh, and ſtands between the two cups: the ſtyle is ſimple, of the length of the ſtamina: the ſtigma is obtuſe: the fruit is a roundiſh, unilocular berry: the ſeeds are ſix, convex on one ſide, and angular on the other.

It is an American, deſcribed by Plumier, 37.

PEPLIS.

THE calyx is a campanulated, permanent perianthium, very large, and divided into twelve ſegments at the rim, which are alternately reflex: the corolla conſiſts of ſix oval and very minute petals, inſerted into the calyx near the verge: the ſtamina are ſix ſhort, ſubulated filaments: the antheræ are roundiſh: the germen is oval, the ſtyle very ſhort, the ſtigma orbicular: the fruit is a cordated capſule, containing two cells: the ſeeds are numerous, very ſmall, and triquetrous: the corolla is ſometimes entirely wanting.

Of this genus there is only one known ſpecies.

PEPLIS. Water Purſlane.

The root is fibrous; the ſtalks are very ſlender, three or four inches long, and in great part procumbent, and take root at the joints; they are uſually reddiſh: the leaves ſtand two at every joint; they are narrow at the baſe, and terminate in an obtuſe extremity; they are ſmooth, even at the edges, and of a pale yellowiſh-green colour. The flowers are very ſmall, and of a purpliſh colour; they ſtand ſingly in the alæ of the leaves, and have no pedicles.

It is common with us about watery places. Dillenius calls it, Portula; Ruppius, Portulaca aquatica ſpuria; C. Bauhine, Alſine paluſtris minor ſerpyllifolia.

Claſs

Class the Sixth. Order the Second.

HEXANDRIA DIGYNIA.

Plants which have in every flower six stamina and two styles.

ORYZA.

THE calyx is a glume, composed of two valves, containing a single flower; it is very small, and the valves are acuminated, and nearly equal in size: the corolla is formed of two valves, obtuse, large, nearly equal, and permanent: the nectarium is composed of two leaves, plane, very small, and situated on the sides of the germen; the leaves of it are narrow at the base, truncated, and deciduous: the stamina are six capillary filaments, of the length of the corolla: the antheræ are bifid at the base: the germen is of a turbinated figure: the styles are two, capillary and reflex: the stigmata are plumose, and are extended lengthway on the styles: there is no pericarpium: the corolla grows to the seed, and becomes of an oblong, oval figure, compressed, thin at the edges, and marked each way with two lines on the sides: the seed is single, large, oblong, obtuse, and compressed.

Of this genus there is only one known species.

ORYZA. **Rice.**

The root is composed of a number of fibres; the radical leaves are a foot and a half long, and an inch broad, of a bright green colour, and smooth. The stalk rises to four feet high; it is round, hollow, striated, and jointed; at every joint stands a single leaf, long, thick, green, and narrow: at the summit of the stalk stands a large panicle, formed of many ramose pedicles, supporting the fructifications, which are large, and of a yellowish colour, except the antheræ, which are purplish.

Rice is cultivated in vast abundance in the East for food; it loves a wet soil.

ATRAPHAXIS.

THE calyx is a perianthium, composed of two coloured, permanent leaves, of a lanceolated figure, and placed opposite: the corolla consists of two roundish, sinuated petals, permanent, and larger than the cup: the stamina are six capillary filaments, of the length of the cup: the antheræ are roundish; the germen is compressed: there is no style: the stigmata are two, and capitated: the cup serves the office of a perianthium, shutting up and including the seed, which is single, roundish, and compressed. These characters sufficiently distinguish the Atraphaxis, without a farther description.

Class the Sixth. Order the Third.

HEXANDRIA TRIGYNIA.

Plants which have in each flower six stamina and three styles.

RUMEX.

THE calyx is a perianthium, composed of three obtuse, reflex, permanent leaves: the corolla consists of three oval petals; they are larger than the leaves of the cup, otherwise, like them, connivent and coloured: the stamina are six very short, capillary filaments: the antheræ are erect and didymous: the germen is of a turbinated form, but three-cornered: the styles are three, capillary, reflex, and shew themselves from between the connivent petals: the stigmata are large and laciniated: the corolla serves the office of a perianthium; it becomes connivent, and of a triquetrous figure, and incloses a single, triquetrous seed.

This genus comprehends the Lapathum and Acetosa of authors.

1. *Rumex*

1. *Rumex floribus hermaphroditis, valvulis integerrimis granulo notatis.* **Bloody Dock.**

The hermaphrodite-flowered Rumex, with undivided, granulated valves.

The root is large, oblong, divaricated, and tough. The leaves are large, ten inches long, and five broad, terminating in a point; they ſtand on long pedicles, and are full of veins, of a deep blood colour; the pedicles of the leaves are alſo blood red, and contain a juice which ſtains the hands, or any thing that it touches, purple. The ſtalk is four feet high, round, ſtriated, and hollow. The flowers are white, with a caſt of red and green, ſmall, and cluſtered at the top of the branches.

It is a native of Virginia, and many other places. C. Bauhine calls it, Lapathum folio acuto rutecute; others, Lapathum ſanguineum.

2. *Rumex floribus hermaphroditis, foliis haſtatis.* **Common Sorrel.**

The hermaphrodite-flowered, haſtated-leaved Rumex.

The root is ſlender, divaricated, and tough: the radical leaves ſtand on long pedicles; they are three inches long, an inch and a half broad, and of a haſtated figure. The ſtalk is ſtriated, ſlender, and a foot and a half high: the leaves ſtand ſingly at the joints. The flowers are large, and of a whitiſh green colour, with a caſt of red; they ſtand in lax cluſters, at the tops of the branches.

It is common in our meadows. C. Bauhine calls it, Acetoſa vulgaris.

3. *Rumex foliis cordato-ſagittatis undulatis.* **Rhubarb.**

The cordato-ſagittated and undulated-leaved Rumex.

The root is a foot and a half long, and three inches in diameter, of a duſky browniſh colour on the ſurface, and of a bright yellow, variegated with purple, within. The leaves are a foot long, and ſeven inches broad at the baſe, where they are cordated, and, as it were, auriculated; they gradually diminiſh in breadth to the point, where they are terminated obtuſely, and often ſlightly emarginated; they are undulated round the edges, of a bright green colour, and ſtand on long and very thick pedicles. The ſtalk is very thick, ſomewhat compreſſed, deeply ſtriated, and about three feet high; it has at every joint a leaf, like the radical ones, but ſmaller, and, from the middle to the top, ſends out ſhort branches, on which the flowers ſtand in little cluſters, or tufts, on ſhort pedicles; the flowers are white, and moderately large.

It is a native of China, Tartary, and Siberia; we have it in ſome gardens. Juſſieu calls it, Rhabarbarum folio oblongo criſpo undulato, flabellis ſparſis; others, Lapathum bardanæ folio.

The root is gathered for uſe in autumn, ſometimes in ſpring, and is the Rhubarb of the ſhops.

The other ſpecies of Rumex are very numerous, but they will be eaſily diſtinguiſhed by their names, the general face and manner of growing being almoſt the ſame in all. The more ſingular are, 1. The ſharp-leaved Rumex. 2. The obtuſe-leaved Rumex. 3. The golden-flowered Rumex. 4. The little, broad-leaved Rumex. 5. The narrow-leaved Rumex. 6. The broad-leaved, garden Rumex. 7. The great water Rumex. 8. The ſinuated-leaved Rumex, called Fiddle Dock. 9. The ſtinking, maritime Rumex. 10. The pellitory-leaved, Ægyptian Rumex. 11. The Rumex, called prickly-ſeeded, Cretic Beet. 12. The tall, broad-leaved Rumex. Theſe are called Lapatha, or Docks, by authors. Of thoſe called Acetoſæ are, 1. The great mountain Rumex. 2. The very long and narrow-leaved Rumex. 3. The arum-leaved Rumex. 4. The limonium-leaved Rumex. 5. The tuberous-rooted Rumex. 6. The roundiſh-leaved Rumex. 7. The roundiſh, emarginated-leaved Rumex. 8. The Cretic, prickly Rumex, with narrow leaves. 9. The round-leaved, ſhrubby Rumex. 10. The ſcutated-leaved Rumex. 11. The multifid-lobed Rumex. 12. The round-leaved, Alpine Rumex.

SCHEUCHZERIA.

THE calyx is a perianthium, divided into ſix rude, permanent, oblong, acute, reflexo-patent leaves: there is no corolla: the ſtamina are ſix very ſhort, flaccid, capillary filaments: the antheræ are erect, obtuſe, very long, and compreſſed: the germina are three, oval and compreſſed, and of the ſize of the calyx: there are no ſtyles; the ſtigmata are oblong, obtuſe at the top, and adhere outwardly to the germen: the fruit conſiſts of three roundiſh, compreſſed, inflated, bivalve, reflexo-diſtant capſules: the ſeeds are ſingle and oblong: there are ſometimes ſix germina, and as many capſules, but three is the more natural and uſual number.

Of this genus there is only one known ſpecies.

SCHEUCHZERIA.

The root is creeping, ſlender, jointed, and fibrated; the radical leaves are five or ſix in number, three inches long, not much more than an eighth of an inch broad, of a pale green colour, and pointed at the ends. The ſtalk is round and ſingle; it grows to four or five inches high; near it's bottom there ſtand two leaves, almoſt oppoſite to one another, and, toward the top, others alternately, one at every joint, with a pedicle for the flower, riſing from the alæ of each; theſe are all like the radical ones, broadeſt at the baſe, where they ſurround the ſtalk, and terminate in a point. The flowers ſtand ſingly on pedicles, each of an inch long; they are moderately large, and of a greeniſh colour, with an admixture of yellow.

It is frequent in the mountainous parts of the northern kingdoms; it loves boggy places. Scheuchzer calls it, Juncoidi affinis paluſtris; C. Bauhine, Juncus floridus minor.

TRIGLOCHIN.

THE calyx is a perianthium, compoſed of three leaves, which are roundiſh, hollowed, obtuſe, and deciduous; the corolla conſiſts alſo of three oval, hollow, obtuſe petals, and is very like the cup; the ſtamina are ſix ſcarce viſible filaments; the antheræ are the ſame in number, and are ſhorter than the corolla: the germen is large; there is no ſtyle; the ſtigmata are three, ſometimes ſix, reflex and plumoſe; the fruit is a capſule of an ovato-oblong figure, and obtuſe; the cells it contains are of the ſame number with the ſtigmata; the ſeeds are ſingle and oblong.

This genus comprehends the Juncago of Tournefort.

1. *Triglochin capſulis trilocularibus linearibus.* **Arrow-headed Grass.**
The Triglochin, with trilocular, linear capſules.

The root conſiſts of a little tuberoſity, furniſhed with a multitude of fibres. The leaves are very narrow, four or five inches long, erect, and of a pale green colour. The ſtalk is round, ſimple, and unjointed; two or three of the radical leaves uſually ſurround it a great way: from the middle of the ſtalk to the top ſtand the flowers, in a looſe ſpike; they are of a greeniſh colour, and pendulous.

It is common with us in ſea-marſhes, where it grows to ten or twelve inches high. C. Bauhine calls it, Gramen junceum ſpicatum, ſive Triglochin.

2. *Triglochin capſulis ſexlocularibus ovatis.* **Sea ſpiked Grass.**
The Triglochin, with ſexlocular, oval capſules.

The root is compoſed of a cluſter of yellowiſh fibres. The leaves are numerous, four or five inches long, extremely narrow, flat on the upper ſide, but rounded underneath, and of a duſky green colour. The ſtalk is round, green, and ſhort. The flowers form a ſpike of four inches long, reaching from it's top almoſt to the bottom; they are very ſmall, and purpliſh. The fruit is a ſtriated, oval capſule.

It is common in our ſalt-marſhes. Cluſius calls it, Gramen marinum ſpicatum; C. Bauhine, Gramen ſpicatum alterum.

COLCHICUM.

THERE is no calyx, unleſs a few vague ſpathæ are to be underſtood as ſuch; the corolla is divided into ſix ſegments; the tube is angular, and radicated; the ſegments of the limb are of a lanceolato-oval figure, concave and erect: the ſtamina are ſix ſubulated filaments, ſhorter than the corolla; the antheræ are oblong, incumbent, and formed of four valves; the germen is buried within the root: the ſtyles are three, filiform, and of the length of the ſtamina: the ſtigmata are reflex, and furrowed; the fruit is a capſule, formed of three lobes, connected intirely by a ſuture; the ſhape obtuſe; the cells in it three in number; the ſeeds numerous, of a roundiſh figure, and rugoſe; the piſtil is ſometimes only trifid at top, ſometimes ſimple.

1. *Colchicum foliis lanceolatis planis erectis.* Meadow Saffron.
The Colchicum, with plane, erect, lanceolated leaves.

The root is about an inch and a half long, more than an inch in breadth, ſomewhat compreſſed, turbinated toward the top, but, in the lower part, terminating in a broad end, like a nail, and ſending thence a number of fibres; it is covered with ſeveral coats, or huſks, of a blackiſh colour, and has uſually a number of ſmall, lateral bulbs adhering to it; internally it is white, and full of a milky juice. The flower appears in autumn: it is extremely beautiful, an inch and a half long, excluſive of the tube, which is ſmooth and delicate. The flower is of a purpliſh white, and the ſegments are each more than an inch broad, narrower at the baſe than in the middle, and terminate in a point. The leaves appear in the ſpring, and periſh before the next flowering ſeaſon; they are five or ſix inches long, an inch and a half broad, of a deep green colour, and pointed at the ends.

It is a native of our meadows, but not common; I found it ſome years ſince abundantly near Calne in Wiltſhire. C. Bauhine calls it, Colchicum commune; others, Colchicum Anglicum purpureum et album.

The other ſpecies of Colchicum are numerous, and the varieties of them from culture almoſt innumerable; theſe have been deſcribed as ſpecies alſo by ſome writers, and have greatly ſwelled the liſt. The principal really diſtinct ones are, 1. The ſpring Colchicum, with a ſimple piſtil, trifid at the end. 2. The many-flowered, ſmaller, white Colchicum. 3. The broad, white hellebore-leaved Colchicum. 4. The broad-leaved Colchicum, with teſſelated flowers. 5. The narrower-leaved, variegated, Chineſe Colchicum. 6. The little-flowered, narrow-leaved, mountain Colchicum. 7. The very narrow-leaved, ſaffron-flowered, meadow Colchicum.

MELANTHIUM.

THE female flower has no calyx; it is compoſed of five petals, of an ovato-lanceolate figure, with thin, linear ungues, longer than the whole petals beſide: the nectarium is a ſpot of a cordated form, ſituated near the inner baſe of the limb of the petals, and from this riſes a ſetaceous filament, of the length of the petal, or nearly ſo: the germen is trigonal; the ſtyles are three, and crooked; the ſtigmata are obtuſe; the fruit is a capſule, of an ovato-triangular figure; the angles are compreſſed; it contains three cells, and in each ſeveral oblong, compreſſed, membranaceous ſeeds.

Theſe characters ſufficiently diſtinguiſh the Melanthium, without a farther deſcription.

MEDEOLA.

THERE is no calyx, but the corolla is ſo like one that it has been miſtaken for it: the corolla conſiſts of ſix petals, of an ovato-oblong figure, equal, patent, and revolute: the ſtamina are ſix ſubulated filaments, of the length of the corolla: the antheræ are incumbent; the germina are three in number, and corniculated, and they terminate in ſtyles: the ſtigmata are thick, and bent backward: the fruit is a berry of a roundiſh figure, divided into three parts, containing three cells, and, in each, a ſingle cordated ſeed.

Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

MENISPERMUM.

MENISPERMUM.

THE calyx is a deciduous perianthium, compoſed of ſix ovato-oblong leaves, erecto-patent, and of the length of the corolla: the corolla conſiſts of ſix ovato-oblong, obtuſe, hollow petals, erecto-patent, as the leaves of the cup: the ſtamina are ſix very ſhort filaments; the antheræ are ſimple, and ſhorter than the corolla: the germina are three, ſuboval, and terminate in as many patenti-reflex ſtyles, of the length of the corolla; the ſtigmata are obtuſe and emarginated: the fruit is compoſed of three oval berries, each containing a ſingle cell, and in it a large, ſingle, lunulated, compreſſed ſeed.

This is the general number of the parts of fructification, but they vary extreamly in this genus.

Meniſpermum foliis peltatis anguloſis. Virginian Ivy.
The peltated and angular-leaved Meniſpermum.

The root is large, woody, and divaricated; the ſtem is woody, round, and ſlender, and ſupports itſelf by means of trees and buſhes; in this manner it grows to a great height: the leaves ſtand ſingly on long pedicles, inſerted not at the edge, but near the center; they are oblong, angulated, and ſomewhat reſemble thoſe of the common great convolvulus: the flower is ſmall; the fruit compoſed of three moderately large berries. It is frequent in North America. Plukenet calls it, Hedera monophyllos convolvuli foliis Virginiana.

SAURURUS.

THE calyx is a permanent perianthium, formed of a ſingle leaf, oblong, coloured, and lateral; there is no corolla: the ſtamina are ſix long, capillary filaments, three on each ſide, and placed oppoſite: the antheræ are oblong and erect; the germen is of an oval figure, and formed of three lobes; there is no ſtyle: the ſtigmata are three, obtuſe and permanent: the fruit is an oval berry, with a ſingle cell; the ſeed is ſingle and oval.

Saururus foliis cordatis petiolatis, ſpicis ſolitariis recurvis. Heart-leaved Lizard's Tail.
The cordated, petiolated-leaved Saururus, with ſingle crooked ſpikes.

The root is ſpreading and whitiſh; the ſtem is ridged, ſolid, and conſiderably thick, but not robuſt enough to ſupport itſelf erect: the leaves ſtand ſingly at the joints on pedicles of three quarters of an inch long; they are three inches, or more, in length, near two and a half in diameter, and ſomewhat reſemble thoſe of our black bryony, being cordated at the baſe, and terminating in a point: The ſpikes are ſlender, five or ſix inches long, and compoſed of very ſmall flowers of a yellowiſh colour; they grow ſingly, oppoſite to the leaves.

It is a native of Virginia and Maryland. Ray calls it, Saururus Marilandicus folio cordato; Plukenet, Serpentaria repens folio bryoniæ nigræ.

2. *Saururus foliis ternatis ſpicis terminatricibus.* Trifoliate Lizard's Tail.
The ternate-leaved, terminatory-ſpiked Saururus.

The root is compoſed of a number of fibres, long, complicated, and ramoſe; the ſtalk is ſtriated, hairy, firm, and hard, but does not ſupport itſelf erect, but climbs on trees in the manner of our ivy. The leaves ſtand three at a joint; they are of an oval figure, half an inch long, and nearly as much in diameter, a little hairy, eſpecially about the edges, and marked with three large, longitudinal ribs. The extremities of the branches are terminated by long ſpikes of flowers, three inches in length, and ſcarce a ſixth of an inch in diameter, much reſembling the tail of a rat.

It is a native of Jamaica. Plumier calls it, Saururus hederaceus triphyllus.

The

The other ſpecies to be mentioned are, 1. The round-leaved, creeping Saururus. 2. The ivy-leaved Saururus, with ſpotted ſtalks. 3. The ſhort-fruited, plantain-leaved Saururus. 4. The little, procumbent Saururus, with thick, heart-faſhioned leaves. 5. The great, cordated-leaved, tree Saururus, called St Maria leaves. 6. The low Saururus, with a fleſhy, pointed leaf. 7. The great, arboreſcent Saururus, with round, umbilicated leaves. 8. The pendulous-ſpiked Saururus. 9. The ſhort-ſpiked, Surinam Saururus.

Claſs the Sixth. Order the Fourth.

HEXANDRIA TETRAGYNIA.

Plants which have ſix ſtamina and only four ſtyles in the flower.

Of this order there is only one known genus.

PETIVERIA.

THE calyx is a permanent perianthium, compoſed of four erect, linear, obtuſe, equal leaves: there is no corolla; but the calyx, being coloured, has much the appearance of one. The ſtamina are ſix erect, equal, ſubulated filaments, of the length of the cup; the antheræ are ſimple: the germen is compreſſed and oblong; the ſtyles are four in number, ſubulated, and placed in a right line: the ſtigmata are obtuſe and permanent: there is no pericarpium but the cruſt of the ſeed: the ſeed is oblong, ſingle, narroweſt at the bottom, broader at the top, and flatted, emarginated, and armed with the four ſtyles, become rigid and acute, and turned back; the intermediate two are longeſt.

It is an American deſcribed by Plumier.

Claſs the Sixth. Order the Fifth.

HEXANDRIA POLYGYNIA.

Plants which have in every flower ſix ſtamina and a great number of ſtyles.

Of this order alſo there is only one known genus.

ALISMA.

THERE are various, trifoliate, acute involucra: the perianthium is compoſed of three oval, hollow, permanent leaves: the corolla conſiſts of three large, roundiſh, plane, and very patent petals: the ſtamina are ſix ſubulated filaments, ſhorter than the corolla; the antheræ are roundiſh: the germina are numerous; the ſtyles are ſimple; the ſtigmata are obtuſe: the fruit conſiſts of capſules arranged together, in a roundiſh or trigonal form; the ſeeds are ſingle and ſmall.

This genus comprehends the Damaſonium of Tournefort, and the Aliſma of Dillenius. In the Damaſonium, Tournefort mentions ſix large, diſtinct, acuminated capſules; in the Aliſma, Dillenius mentions numerous ſmall and obtuſe ones.

1. *Aliſma fructu obtuſo, trigono*
The obtuſe, trigonal-fruited Aliſma. **Great Water Plantain.**

The root is compoſed of a great number of thick, whitiſh fibres. The radical leaves ſtand on pedicles, three or four inches long; they are of a ſuboval, acuminated figure, three inches long, and two broad, ſmooth, of a pale green, and even at the edges: the ſtalk grows to two or three feet high; it is round, thick, ſingle, and ſends off on every ſide a multitude of branches; they are ſmall, and are divided at their extremities into numerous others, and on theſe ſtand the flowers, which are moderately large, and of a reddiſh white.

The plant is common about waters. C. Bauhine calls it, Plantago aquatica latifolia; and, as it ſometimes has it's leaves narrower than ordinarily, he calls that variety, Plantago aquatica anguſtifolia; others call it, Plantago aquatica major, including both varieties under that name.

2. *Aliſma fructu globoſo undique echinato.* Little Water Plantain.
The globoſe and echinated-fruited Aliſma.

The root is compoſed of a number of white, thick, complicated fibres: the leaves ſtand on ſlender pedicles, two or three inches long; they are oblong, narrow, ſmooth, of a pale green, and undivided at the edges: the ſtalk is ſlender, hollow, naked, and a foot, or more, in height; it ſends out a great number of ſhort branches, near the top, and on theſe ſtand numerous, ſmall, whitiſh flowers, with yellow ungues; the heads which ſucceed theſe are roundiſh and echinated; thoſe of the former ſpecies are diſpoſed into a trigonal form.

This is common alſo in wet places. Ray calls it, Plantago aquatica minor.

The other ſpecies are, 1. The great, trigonal-headed, narrow, and long-leaved Aliſma; and, 2. The low, ſtarry-headed Aliſma.

Claſs the Seventh.

HEPTANDRIA.

Plants which have ſeven ſtamina in every flower.

Of this claſs there are only two genera, and theſe have both only a ſingle ſtyle in the flower.

HEPTANDRIA MONOGYNIA.

TRIENTALIS.

THE calyx is a permanent perianthium, formed of ſeven narrow, lanceolated, pointed, patent leaves: the corolla is plane and ſtellated; it conſiſts of a ſingle petal, divided into ſeven ſegments, and that ſo deeply, that they cohere only by their ungues; they are of an ovato-lanceolate figure, and ſomewhat longer than the calyx: the ſtamina are ſeven capillary filaments, of the length of the cup, and inſerted into the ungues of the corolla: the antheræ are ſimple: the germen is globoſe; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is capitated: the fruit is a dry, globoſe berry, having only one cell, and covered with only a very thin cruſt, which burſts irregularly: the ſeeds are few in number and angulated; the receptacle is very large, and is hollowed for the reception of the ſeeds. The parts of fructification, though uſually ſeven in this plant, yet vary ſometimes from that number.

There is only one known ſpecies of it.

TRIENTALIS.

The root conſiſts of a number of long, white fibres; the radical leaves are oval, pointed, and an inch and a half long: the ſtalk is round, ſmooth, ſlender, and about four or five inches high. It is naked to the top, where there ſtand ſix or ſeven leaves in a kind of circle; they have ſhort pedicles, and are of the figure of the radical ones, but ſmaller, and more pointed, and of a pale green colour. At the baſe of theſe there are ſometimes two or three ſmall and roundiſh leaves, of a browniſh colour, and and from the center of them riſe uſually two pedicles, ſlender, of a reddiſh colour, and near two inches long, and on the ſummit of each of theſe ſtands a ſingle and very beautiful ſtellate white flower.

It is a native of England, but is ſcarce with us: in Germany, Sweden, and Denmark, it is more common, Ray calls it, Alſinanthemos; C. Bauhine, Pyrola alſines flore; J. Bauhine, Herba trientalis.

ESCULUS.

THE calyx is a ſmall, ventricoſe perianthium, formed of a ſingle leaf, divided into five parts at the extremity. The corolla conſiſts of five roundiſh petals, plane and patent; their edges plicated or undulated; their ungues very narrow, inſerted into the calyx, and equally coloured: the ſtamina are ſeven or eight ſubulated, declinated filaments, of the length of the corolla; the antheræ are aſſurgent: the germen is roundiſh; the ſtyle ſmall; the ſtigma acuminated: the fruit is a roundiſh, echinated, coriaceous capſule, formed of three valves, and containing only one cell: the ſeeds are two, and globoſe; often indeed there is formed only one, but it is from accident; two are always the intent of nature.

This genus comprehends the Hypocaſtanum of Tournefort, and the Eſculus and Pavia of Linnæus.

1. *Eſculus floribus heptandris.* **The Horſe-Cheſnut.**
The Eſculus, with ſeven ſtamina in the flower.

The root is brachiated and ſpreading; the tree very large and ramoſe: the leaves are palmated; each is compoſed of ſeven, others annexed to the ſame pedicle; theſe are of an oblong figure, broad, rough, and indented at the edges: the flowers are very beautiful; they ſtand in conſiderable numbers, on ſeparate peduncles annexed to common pedicles, ariſing from the alæ of the leaves; they are large and white, with a tinge of fleſh colour: the fruit is echinated and very large; the cheſnut contained in it is like the common kind, but larger, rounder, and of a diſagreeable taſte.

It is a native of the Eaſt; we had it brought into Europe in the year 1550, ſince which time it is common in our gardens, &c. Tournefort calls it, Hypocaſtanum vulgare; C. Bauhine, Caſtanea multifido folio.

2. *Eſculus floribus octandris.* **The ſcarlet Horſe-Cheſnut.**
The Eſculus, with eight ſtamina in the flower.

The root is brachiated; the leaves are compound, like thoſe of the common horſe-cheſnut, but the ſingle leaves ſmaller and narrower: the flower is very beautiful, and of a bright red; it ſomewhat reſembles a monopetalous, bilabiated flower, though in reality formed of five petals, as that of the former.

It is a native of the Eaſt; but we have it in our gardens. Boerhaave calls it, Pavia; Plumier, Ricinoides Americana caſtaneæ folio; Plukenet took it to be the ſea monna of Piſo, but erroneouſly.

Claſs the Eighth.

OCTANDRIA.

Plants which have in every flower eight ſtamina.

Of theſe ſome have only one ſtyle, ſome have two, ſome three, ſome four, and ſome more numerous ones.

THE ſeveral genera will hence therefore be arranged into five orders: The firſt containing ſuch as have only one ſtyle; the ſecond, ſuch as have two; the third, ſuch as have three, and ſo on.

Order

Order the First.

OCTANDRIA MONOGYNIA.

Plants which have in every flower eight ſtamina and only one ſtyle.

TROPÆOLUM.

THE calyx is a deciduous perianthium, compoſed of a ſingle leaf, divided into five ſegments, erecto-patulous, acute, coloured, and the two lower ones narrower than the reſt. The corolla conſiſts of five roundiſh petals, inſerted into the diviſions of the cup; the two upper petals are ſeſſile; the three others have very long and barbated ungues: the ſtamina are eight ſhort, ſubulated, declinated, unequal filaments; the antheræ are erect, oblong, quadrilocular, and aſſurgent: the germen is roundiſh, ſtriated, and formed of three lobes: the ſtyle is ſimple, erect, and of the length of the ſtamina: the ſtigma is trifid and acute: the fruit conſiſts of three capſules convex, ſulcated, and ſtriated on one ſide, and angular on the other: the ſeeds are three, gibbous on one ſide, and angulated on the other, but upon the whole ſomewhat roundiſh, and ſtriated deeply.

This genus comprehends the Cardamindum of authors.

1. *Tropæolum foliis ſubquinquelobis, petalis obtuſis.* Indian Creſs.
The obtuſe-petaled Tropæolum, with ſubquinquelobate leaves.

The root is ſmall, oblong, and divaricated: the ſtalks are ſlender and weak; they are to be ſupported by ſticks or buſhes, otherwiſe they trail upon the ground. The leaves ſtand ſingly at the joints; they are an inch and half, or more, in diameter, and have each a pedicle of five inches long, reddiſh, ſlender, and tortile; this is inſerted into the middle of the leaf, not at the ſide, and the figure of the leaf is peltated; approaching to round, but, when moſt perfect, lightly ſinuated into five lobes. From the alæ of the leaves ariſe the pedicles of the flowers; they are long, ſlender, and contorted; the flower is large, and of an extreamly beautiful yellow, with an admixture of ſcarlet.

It is a native of Peru; it was brought into Europe in 1684, and is now common in our gardens. Tournefort calls it, Cardamindum ampliore folio et majori flore; Ray and others, Naſturtium Indicum.

2. *Tropæolum foliis integris, petalis acuminato-ſetaceis.* Little Indian Creſs.
The Tropæolum, with undivided leaves, and acuminato-ſetaceous petals.

The root is fibrous; the ſtalks are very ſlender, weak, and tortuous: the pedicles of the leaves are long and ſlender; the leaves themſelves ſmall, round, and not at all ſinuated at the edges: the flowers are of about half the ſize of thoſe of the former, and the petals acuminated: their colour is a pale yellow.

It is a native of Peru; but we have it, with the other, in ſome gardens. C. Bauhine calls it, Naſturtium Indicum minus; Tournefort, Cardamindum minus.

ACER.

THE calyx is a permanent perianthium, compoſed of a ſingle leaf, plane and entire at the baſe, but divided toward the top into five acute, coloured ſegments: the corolla is ſcarce larger than the cup; it conſiſts of five oval, obtuſe, patent petals, broadeſt outwardly. The ſtamina are eight ſhort, ſubulated filaments: the antheræ are ſimple; the farina cruciform: the germen is compreſſed, and is immerſed in a large convex, perforated receptacle: the ſtyle is filiform, and grows taller, as the flower remains open: the ſtigmata are two, acuminated, ſlender, and reflex. The fruit conſiſts of a number of capſules, equal to that of the ſtigmata; they grow together

ther at the baſe, and are compreſſed, roundiſh, and each is terminated by a very large, membranaceous ala: the ſeeds are ſingle, and roundiſh: at the firſt opening of the flower in this genus the ſtigmata only appear, the ſtyle grows in length afterwards. In ſome ſpecies the corolla is ſcarce diſtinct from the calyx, and the ſtamina are long. The flowers are often of two kinds in the ſame cluſter; all, indeed, are hermaphrodites, but, in the lower ones, the antheræ never burſt, but the piſtil becomes a fruit; in the upper ones the antheræ burſt, and the farina is ſhed, but the piſtils decay.

1. *Acer foliis quinquelobis acutis, obtuſe ſerratis, petiolis canaliculatis.* The Sycamore Tree.

The Acer, with quinquelobate and obtuſely dentated leaves.

The root is large and brachiated; the tree very large and beautiful; the bark of the young ſhoots reddiſh; the leaves are very large and broad, divided into five lobes, ſerrated at their edges, and of a dark green colour on the upper ſide, but paler underneath, and uſually ſomewhat whitiſh and hoary. The flowers are very ſmall, and of a greeniſh-white colour. The fruit is large and beautifully variegated with green and purple, in various degrees.

It is a native of Germany; it is common with us in plantations. We commonly, but very improperly, call it the Sycamore; it's proper name is the larger Maple. C. Bauhine calls it, Acer majus.

The other ſpecies of the Acer are, 1. The common, ſmall Acer, or Maple, of our hedges. 2. The Acer with finely-divided leaves. 3. The great-leaved, Virginian Acer. 4. The broad, platanus-leaved Acer. 5. The ſmall, ſugar Acer. 6. The rounder-leaved Acer, the Opalus of the Italians. 7. The narrower-leaved Acer.

DODONÆA.

THE calyx is a perianthium, divided into three erect, equal, oval ſegments: there is no corolla: the ſtamina are eight extremely ſhort filaments: the antheræ are oblong, but ſcarce of the length of the calyx: the germen is triquetrous, and longer than the cup: the ſtyle is ſubulated, and very long; the ſtigma is ſimple: the fruit is a roundiſh capſule, with three cells, and with prominent, inflated angles, in the ſame number; the ſeeds are ſingle.

Burman refers this to the Carpinus, Plumier to the Staphylodendron, but erroneouſly. The flower often varies in the addition of a third part to the number of the ſegments, &c.

Theſe characters ſufficiently diſtinguiſh the Dodonæa, without a farther deſcription.

GRESLEA.

THE calyx is a perianthium, formed of a ſingle leaf, of a turbinated form, erect, campanulated, and divided into four ſegments: the corolla conſiſts of four extremely minute petals, of an oval figure, ariſing from the denticulations of the cup, and ſcarce larger than they: the ſtamina are eight extremely long, ſubulated, erect filaments: the antheræ are ſimple and erect; the germen is oval; the ſtyle is filiform, and of the length of the ſtamina; and the ſtigma is ſimple.

Of this genus there is only one ſpecies, which is ſufficiently diſtinguiſhed by theſe characters, without a farther deſcription.

ALLOPHYLLUS.

THE calyx is a perianthium compoſed of four leaves, of an orbicular figure, and two oppoſite ones, ſmaller than the others: the corolla conſiſts of four petals; the ſtamina are eight ſlender filaments; the antheræ are oblong; the germen is didymous.

Theſe characters ſufficiently diſtinguiſh the Allophyllus, without a farther deſcription.

JAMBOLIFERA.

THE calyx is a perianthium, compoſed of a ſingle leaf, divided into four ſhort ſegments at the end: the corolla conſiſts of four petals, and is of an infundibuliform ſhape: the ſtamina are eight flatted filaments.

Theſe characters ſufficiently diſtinguiſh the Jambolifera, without a farther deſcription.

MIMUSOPS.

THE calyx is a perianthium, compoſed of eight leaves: the corolla conſiſts of eight petals: the ſtamina are eight ſlender filaments: the fruit is a drupe.

Theſe characters ſufficiently diſtinguiſh the Mimuſops, without a farther deſcription.

LAWSONIA.

THE calyx is a ſmall, permanent perianthium, divided into four ſegments: the corolla conſiſts of four petals, plane, patent, and of an ovato-lanceolated figure: the ſtamina are eight filiform filaments, of the length of the corolla; they ſtand by pairs, within the petals: the antheræ are roundiſh; the germen is roundiſh; the ſtyle is ſimple, permanent, and of the length of the ſtamina; the ſtigma is capitated: the fruit is a globoſe capſule, terminating in a point, and containing four cells; the ſeeds are numerous, angular, and acuminated.

There is but one known ſpecies of this genus, which is ſufficiently diſtinguiſhed by theſe characters, without a farther deſcription.

RHEXIA.

THE calyx is a permanent perianthium, formed of a ſingle leaf, oblong, tubulated, ventricoſe toward the bottom, and divided into four ſegments at the mouth: the corolla conſiſts of four petals, roundiſh, patent, and inſerted into the calyx: the ſtamina are eight filiform filaments, longer than the calyx, and inſerted into it: the antheræ are oblong and declinate: the germen is roundiſh; the ſtyle is ſimple, and of the length of the ſtamina; the ſtigma is thick and oblong: the fruit is a roundiſh capſule, formed of four valves, containing four cells, and contained in the belly of the cup; the ſeeds are numerous and roundiſh; the cup, in ſome, is ſmooth, in others it is elegantly ſtellated with a kind of ſhort hairs.

OENOTHERA.

THE calyx is a deciduous perianthium, formed of a ſingle leaf; it's tube is cylindric, long, and erect; it's limb is divided into four oblong, acute, deflex ſegments: the corolla conſiſts of four plane petals, of an obverſely cordated figure, of the ſize of the ſegments of the cup, and inſerted into the diviſures of them: the ſtamina are eight crooked, ſubulated filaments, ſhorter than the corolla, and inſerted into the tube of the calyx: the antheræ are oblong and incumbent: the germen is cylindric, and placed under the tube of the cup; the ſtyle is filiform, of the length of the ſtamina; the ſtigma is divided into four parts, thick, obtuſe, and reflex: the fruit is a cylindric capſule, with four low angles; it is formed of four valves, and contains four cells: the ſeeds are numerous, and angulated; the receptacle is columnar, free, and of a quadragonal form.

This genus comprehends the Onagra of Tournefort.

OEnothera foliis ovato-lanceolatis planis. The Primroſe.
The OEnothera, with plane, lanceolated leaves.

The root is oblong, white, and of the thickneſs of a finger. The ſtalk is robuſt, browniſh, ſpotted toward the top, and downy; it is round toward the bottom, but grows angulated, as it ſends out branches higher up; it grows to four feet high, erect, firm,

firm, and rigid. The leaves are three inches long, an inch broad, ſinuated, and dentated at the edges; they ſtand alternately on the ſtalk, and cloſe. The flowers are very large, and of a beautiful yellow colour, in ſhape much like thoſe of the primroſe.

It is a native of Virginia; it was brought into England in 1680, and is now common in our gardens. C. Bauhine calls it, Lyſimachia lutea corniculata; Moriſon, Lyſimachia non pappoſa lutea Virginica.

The other ſpecies are, 1. The narrow-leaved, long-horned OEnothera. 2. The little-flowered, willow-leaved OEnothera. 3. The betony-leaved, rough-fruited OEnothera. 4. The arſmart-leaved, little-flowered OEnothera. 5. The nerium-leaved OEnothera.

EPILOBIUM.

THE calyx is a deciduous perianthium, compoſed of four oblong, acuminated, coloured leaves: the corolla conſiſts of four roundiſh, patent petals, ſomewhat emarginated: the ſtamina are eight ſubulated filaments, alternately ſhorter; the antheræ are oval, compreſſed, and obtuſe: the germen is cylindric, very long, and placed below the receptacle: the ſtyle is filiform; the ſtigma is divided into four parts, thick, obtuſe, and revolute: the fruit is an extremely long, cylindric, ſtriated capſule, formed of four valves, and containing four cells; the ſeeds are numerous, oblong, and coronated with a downy matter; the receptacle is very long, of a tetragonal figure, ſquare, free, flexile, and coloured.

This genus comprehends the Chemænerion of Tournefort, the Lyſimachia ſiliquoſa of others. In ſome ſpecies the ſtamina and piſtil are erect, in others they are declinate, and in ſome of theſe the declination is ſideways, in others downwards.

1. *Epilobium floribus difformibus, piſtillo declinato.* Roſe-bay
The difform-flowered Epilobium, with a declinated piſtil. Willow-herb.

This is the talleſt and moſt beautiful of all this genus. It's root is white, oblong, thick, and creeping. The ſtalk is thick, ſmooth, furrowed, and variegated with green and purple. The leaves ſtand very cloſe; they are three or four inches long, ſcarce more than half an inch broad, ſmall at the baſe, and terminate in a point. The flowers are large, and of a bright red colour, and ſtand on pedicles in a regular order, ſo as to form a tall, beautiful ſpike, on the top of the ſtalk.

It is a native of England, but not common; we have it in Cane-wood near Highgate. C. Bauhine calls it, Lyſimachia Chamænerion dicta, latifolia; others, Onagra and Chamænerion.

2. *Epilobium foliis lanceolatis ſerratis.* Common purple
The Epilobium, with lanceolated, ſerrated leaves. Willow-herb.

The root is creeping, moderately thick, and of a reddiſh colour. The ſtalk is round, hairy, thick, and four feet high. The leaves are four inches long, near three quarters of an inch broad, pointed at the ends, ſerrated about the edges, of a pale green colour, and ſomewhat hairy. The flowers are of a pale purple colour; they grow on ſingle pedicles, from the alæ of the leaves toward the top of the plant, and ſtand on long pods: the tops of the plant have a very ſingular, agreeable ſmell.

It is common about waters. C. Bauhine calls it, Lyſimachia ſiliquoſa hirſuta parvo flore, and deſcribes a variety of it with the flowers larger, as another ſpecies; in this error moſt others alſo follow him.

The other ſpecies of Epilobium are, 1. The great, ſmooth Epilobium. 2. The narrow-leaved Epilobium, with bifid petals. 3. The chickweed-leaved Epilobium. 4. The trifoliate Epilobium. 5. The ſhining, denticulated-leaved Epilobium. 6. The prunella-leaved Epilobium. 7. The almond-leaved, ſmooth Epilobium. 8. The origanum-leaved Epilobium.

ERICA.

THE calyx is a permanent perianthium, compoſed of four oval, erect, coloured leaves, larger than the flower: the corolla conſiſts of a ſingle petal, erect, and divided into four ſegments at the edge: the ſtamina are eight capillary filaments, affixed to the receptacle; the antheræ are bicornate: the germen is roundiſh; the ſtyle is filiform, declinate, and longer than the ſtamina: the ſtigma is coronated, of a quadragonal figure, and divided into four parts: the fruit is a roundiſh capſule, ſmaller than the cup, covered, formed of four valves, and contains four cells: the ſeeds are numerous and very ſmall. There are ſome ſpecies which have a double calyx.

1. *Erica foliis quadrifariam imbricatis, triquetris, glabris, erectis, corollis inequalibus calyce brevioribus.* **Common Heath.**
The quadrifariouſly imbricated-leaved Erica, with ſhort corollæ.

The root is woody and brachiated; the ſtem woody, thin, and covered with a pale brown bark: it grows to about two feet high, and is very ramoſe. The leaves are oblong and ſlender, of a ſquare figure, compoſed of four ſeries of ſmall leaves, and green all the winter. The flowers are ſmall, and of a bright red colour, and ſtand in a beautiful order on the tops of the branches.

It it common every-where on heaths. C. Bauhine calls it, Erica vulgaris glabra.

2. *Erica foliis ſubulatis, ciliatis, quaternis, corollis globoſo-ovatis, terminatricibus confertis.* **Beeſom-Heath.**
The ſubulated, ciliated, four-leaved Erica, with globoſe flowers terminating the branches.

The root is extremely long, divaricated, tough, and woody; the ſtem is alſo woody, and is uſually in part procumbent. The leaves are ſomewhat broad, ſhort, and of a dark colour; they ſtand four at a joint, round the ſtalks, which are a little hairy. The flowers are large, of a fine bright red colour, and of an oval figure, approaching to roundneſs; they are placed in cluſters at the tops of the branches.

It is frequent with us on heaths. C. Bauhine calls it, Erica ex rubro nigricans ſcoparia; Ruppius, Erica ſpuria.

The other ſpecies are, 1. The tall, white Erica. 2. The long-leaved, purple Erica. 3. The juniper-leaved, many-flowered Erica. 4. The greeniſh-flowered Erica. 5. The great Erica, with deciduous leaves. 6. The arbutus-flowered Erica. 7. The ternate-leaved, procumbent Erica. 8. The procumbent, herbaceous Erica. 9. The myrtle-leaved Erica. 10. The great, ſhort-leaved Erica. 11. The ſhort, capillaceous-leaved Erica.

DAPHNE.

THERE is no calyx: three flowers uſually proceed from the ſame germen: the germen conſiſts of a ſingle leaf: the tube is cylindric, imperforated, and larger than the limb: the limb is divided into four oval, acute, plane, patent ſegments: the ſtamina are eight very ſhort filaments, inſerted into the tube, the alternate ones lower: the antheræ are roundiſh, erect, and contain two cells: the germen is oval; there is no ſtyle; the ſtigma is depreſſed, plane, and capitated: the fruit is a roundiſh berry, containing only one cell; the ſeed is ſingle, round, and fleſhy.

1. *Daphne floribus ſeſſilibus infra folia elliptico-lanceolata.* **Mezereon.**
The ſeſſile-flowered Daphne, with elliptico-lanceolate leaves.

This is a ſhrub of three or four feet high. The root is long, thick, and divaricated. The ſtem is ſmall and tough; it's bark thin, greyiſh, and tough, and, under this, there is a green one. The flowers appear before the leaves; they are ſmall, and of a beautiful pale

pale red colour, very numerous, and make a very beautiful appearance. The leaves grow ſeveral from the ſame tubercle; they are long, narrow, ſoft, and of a pale green colour; the berries are red.

It is a native of many parts of Europe, but not of England. C. Bauhine calls it, Laureola folio deciduo, flore purpureo, officinis laureola fœmina; others, Chamælea and Mezereon.

2. *Daphne floribus racemoſis lateralibus, foliis lanceolatis integris.* Spurge Laurel.

The racemous, lateral-flowered Daphne, with undivided, lanceolated leaves.

This riſes to a ſhrub of four feet high; it's leaves remain green all winter; it's root is long and divaricated; the ſtem as thick as a man's thumb, and covered with a ſmooth bark; toward the top it divides into ſeveral branches, and, on the upper parts of theſe, ſtand cluſters of long, narrow, thick, gloſſy, dark green leaves and flowers; theſe are ſmall, and of a yellowiſh-green colour.

It is common in our woods. C. Bauhine calls it, Laureola ſemper virens flore viridi; others, Laureola and Laureola mas.

Both theſe ſpecies are ſtrong cathartics, but they are too rough to be given with ſafety.

GNIDIA.

THE calyx is a coloured perianthium, of an infundibuliform ſhape, and formed of a ſingle leaf: the tube is very long, and filiform: the limb is divided into four parts, and plane: the corolla conſiſts of four plain, ſeſſile petals, ſhorter than the cup, and inſerted into it: the ſtamina are eight erect, ſetaceous filaments, about the length of the flower, and their antheræ are ſimple: the germen is oval; the ſtyle is filiform, of the length of the ſtamina, inſerted into the ſide of the germen: the ſtigma is capitated, and hiſpid; there is no pericarpium: the ſeed is ſingle, oval, and obliquely acute, and is retained in the bottom of the cup.

This comprehends the Struthia of Van Royen.

LACHNÆA.

THE calyx is a permanent, one-leaved perianthium: the tube is long and ſlender; the limb divided into four unequal parts; the upper ſegment is erect and ſmall, the other three are reflex, and the intermediate one the largeſt: there is no corolla; the ſtamina are eight ſetaceous filaments, erect, and of about the length of the corolla: the antheræ are ſimple; the germen is oval; the ſtyle is filiform, of the length of the ſtamina, inſerted into the ſide of the germen, and it's ſtigma capitated and hiſpid: there is no pericarpium; but the ſeed, which is ſingle, oval, and obliquely acute, remains in the bottom of the cup.

Theſe characters ſufficiently diſtinguiſh the Lachnæa, without a farther deſcription.

PASSERINA.

THE calyx is wanting; the corolla is of very ſhort duration; it is compoſed of a ſingle petal: the tube is cylindric, ſlender, and ventricoſe below the middle: the limb is patent, and divided into four parts; the ſegments are oval and obtuſe: the ſtamina are eight ſetaceous filaments, of the length of the limb, and are inſerted into the top of the tube: the antheræ are of an oval figure, and erect; the germen is oval, and ſtands within the tube of the corolla; the ſtyle is filiform, and grows from one ſide of the top part of the germen, and is of the length of the tube of the corolla: the ſtigma is capitated, and is all over hiſpid: the fruit is a coriaceous capſule, of an oval figure, with only one cell: the ſeed is ſingle, oval, pointed at each end, with oblique extremities.

Theſe characters ſufficiently diſtinguiſh the Paſſerina, without a farther deſcription.

STELLERA.

THE Stellera has no calyx; the corolla is deciduous, and is formed of a ſingle petal, and divided into four ſegments, including the ſtamina, which are eight ſlender, ſhort filaments; the antheræ are roundiſh; the fruit is a ſingle, naked ſeed.

Theſe characters ſufficiently diſtinguiſh the Stellera, without a farther deſcription.

SANTALUM.

THE calyx is a mere margin, coronating the germen, and ſlightly quadridentated; the corolla conſiſts of a ſingle petal, of a campanulated form; the limb is plane, quadrifid, and acute; the ſtamina are eight filaments, inſerted into the top of the corolla, and alternately ſhorter; the antheræ are ſimple; the germen is turbinated, and placed under the receptacle of the flower; the ſtyle is of the length of the ſtamina; the ſtigma is ſimple; the fruit is a berry.

Of this genus there is only one known ſpecies.

SANTALUM. The yellow and white Saunders Tree.

The root is large and brachiated. The tree grows to forty or fifty feet high, and is very ramoſe; it's bark is of a deep brown colour; the outer part of the wood is white, the heart yellow. The leaves ſtand in an irregular manner on the branches; they are pinnated; the pinnæ are uſually three pair and an odd one, each an inch and a half long, three quarters of an inch broad, thick, of a fine green colour, and ſweet ſmell, when bruiſed. The flowers are of a beautiful blue colour; the fruit is a berry of the ſize of our cherries.

It is a native of the Eaſt Indies, and furniſhes us with the white and yellow Saunders of the ſhops, the firſt being the outer part of the wood, the latter the heart; they are both eſteemed cordial and cephalic. The red Saunders of the ſhops is the wood of a ſiliquoſe tree, of a very different claſs from this; nor are the woods, indeed, at all alike; one would wonder how they came by the ſame name.

MEMECYLUM.

THE calyx is a margin, coronating the germen; the corolla conſiſts of four petals; the ſtamina are eight ſlender filaments; the antheræ are tumid; the germen is roundiſh; the fruit is a berry.

Theſe characters ſufficiently diſtinguiſh the Memecylum, without a farther deſcription.

VACCINIUM.

THE calyx is a very ſmall, permanent perianthium, ſtanding on the germen: the corolla is formed of a ſingle petal, of a campanulated form, divided into four revolute ſegments at the edge; the ſtamina are eight ſimple filaments; the antheræ are bicornate, furniſhed at the back with two patent ariſtæ, and ſplitting at the top; the germen is placed below the receptacle; the ſtyle is ſimple, and longer than the ſtamina, and the ſtigma obtuſe: the fruit is a globoſe, umbilicated berry, containing four cells; the ſeeds are ſmall.

This genus comprehends the Vaccinium and Oxycoccus of Tournefort.

The number of the ſtamina, &c. often varies, adding a fourth; the calyx is in ſome ſpecies entire, in others divided into four parts; the corolla in the Oxycoccus of Tournefort is, when fully blown, revolute almoſt to the baſe.

1. *Vaccinium*

1. *Vaccinium caule angulato, foliis ovatis ſerratis, deciduis.* **Black Whortleberries.**

The angular-ſtalked Vaccinium, with oval, ſerrated, and deciduous leaves.

The root is very long, woody, and creeping. The ſtalk is woody, green, angulated, and tough, a foot or more in height, and ramoſe; the leaves ſtand thick, and are an inch long, half an inch broad, pointed at the ends, and ſerrated. The flowers are ſmall, and of a hollowed figure, and pale red colour; they ſtand on ſingle pedicles. The fruit is a round, umbilicated, bluiſh-black berry.

It is common with us on heaths. J. Bauhine calls it, Vitis Idæa anguloſa.

2. *Vaccinium ramis filiformibus, foliis ovatis perennantibus, pedunculis ſimplicibus, ſtipula duplici.* **Marſh Whortle.**

The thin-ſtalked, oval, perennial-leaved Vaccinium, with ſimple peduncles and a double ſtipula.

The root is long, very ſlender, creeping, and of a reddiſh colour. The ſtalks are tough and woody, very thin, reddiſh in colour, and procumbent. The leaves ſtand alternately; they are very ſmall, oval, and like the leaves of ſerpyllum. The flowers grow at the tops of the branches, three or four together; each has it's own pedicle, and ariſes from a kind of durable caſe; they are ſmall and purple. The berries are large and red, marked with a purple, cruciform umbilicus, often yellow, and ſpotted with red.

It is found in boggy places. C. Bauhine calls it, Vitis Idæa paluſtris; others, Oxycoccus and Vaccinium paluſtris.

The other ſpecies are, 1. The great Vaccinium, or Vitis Idæa of the ſhops. 2. The ſmaller-fruited, black Vaccinium. 3. The red Vaccinium. 4. The oblong, whitiſh-leaved Vaccinium. 5. The Ceylon Vaccinium, with white berries. 6. The pyrola-leaved Vaccinium. 7. The acute-leaved, marſh Vaccinium.

DIOSPYROS.

THE calyx of the flower is a ſmall, permanent perianthium, formed of a ſingle leaf, lightly divided into four ſegments, and obtuſe: the corolla conſiſts of a ſingle petal, of an ovato-campanulated figure, very lightly divided into four ſegments, obtuſe and ſmall: the ſtamina are eight ſhort, ſetaceous filaments: the antheræ are oblong and acuminated; the germen is roundiſh; the ſtyle is ſingle, and longer than the ſtamina, lightly divided into four ſegments, and the ſtigmata obtuſe: the fruit is a large, globoſe berry, containing ſeveral cells, and placed on a very large, patent calyx; the ſeeds are oval and acuminated.

This genus comprehends the Guaiacana of Tournefort. There is one ſpecies which adds one to the number of all the parts of fructification.

Claſs the Eighth. Order the Second.

OCTANDRIA DIGYNIA.

Plants which have in every flower eight ſtamina and two ſtyles.

MOERHINGIA.

THE calyx is a permanent, patent perianthium, compoſed of four little, lanceolated leaves: the corolla is patent, and compoſed of four oval, undivided petals, ſhorter than the cup: the ſtamina are eight capillary filaments; the antheræ are ſimple; the germen is globoſe; the ſtyles are two, erect, and of the length of the ſtamina; the ſtigmata are ſimple; the fruit is a capſule, of a ſubglobоſe figure, formed of four valves, containing only one cell; the ſeeds are numerous, roundiſh, and convex on one ſide, and angular on the other

1. *Moerhingia*

1. *Moerhingia pedunculis unifloris.* Mossy Chickweed.
The single-flowered Moerhingia.

The root is slender and fibrated; the plant is very small and delicate. The stalks are numerous, round, very slender, and procumbent, three or four inches long, and ramose: the leaves stand two at a joint; they are an inch, or more, in length, as thin as a fine thread, and of a bright green colour. The flowers stand singly on the pedicles, and are small and white, the capsules browniſh.

It is common on the Alps and Apennines. C. Bauhine calls it, Alsine tenuifolia muscosa; others, Alsine muscosa.

2. *Moerhingia scapis bifloris.*
The biflorous Moerhingia.

The root is perennial and small; the stalks numerous, and very thick set with leaves toward the base; the leaves very narrow, and about half an inch long: the stalks which support the flowers rise from these; they are half an inch long, and have about their middle a pair of very minute leaves; from the alæ of these grow pedicles for the flowers, which are small and white, always two upon the stalk.

Linnæus first discovered this in Lapland; he there calls it, Sagina ramis erectis bifloris; but, when he called it thus, he had not examined it's characters.

CHRYSOSPLENIUM.

THE calyx is a coloured, permanent perianthium, patent, and divided into four oval segments, two of the opposite ones smaller than the others: there is no corolla: the stamina are eight very short, erect, subulated filaments, placed in a quadragonal receptacle: the antheræ are simple; the germen is immersed in the receptacle, and terminates in two styles, of a subulated figure, and of the length of the stamina: the stigmata are obtuse: the fruit is a capsule, divided into two parts, and armed with two prominences, or beaks, surrounded by the green cup, and formed of two valves, but contains only one cell: the seeds are numerous, and very small.

1. *Chrysosplenium foliis alternis.* The greater golden Saxifrage.
The alternate-leaved Chrysosplenium.

The root is small and creeping: the stalk is very tender, green, round, and a little hairy, square, and in part procumbent, and five or six inches in length: the leaves are roundish, somewhat cordated at the base, and crenated deeply about the edges, of a pale green colour, and a little hairy; they stand alternately, and have pedicles an inch or two in length. The flowers are very small, and of a bright yellow, or gold colour.

It is common on bogs. Ray calls it, Saxifraga aurea foliis pediculis oblongis insidentibus.

2. *Chrysosplenium foliis oppositis.* The lesser golden Saxifrage.
The opposite-leaved Chrysosplenium.

The root is creeping and small; the stalks are square, hairy, in part procumbent, and about four inches long: those which produce flowers are usually shorter, but more erect than the rest. The leaves are small, roundish, and crenated at the edges; they stand in pairs, on very short pedicles. The flowers are very small, and yellow; they stand on very short pedicles, in the divarications of the branches.

It is common in boggy places. C. Bauhine calls it, Saxifraga rotundifolia aurea.

GALENIA.

THE calyx is a very small, hollow perianthium, divided into four oblong segments: there is no corolla: the stamina are eight capillary filaments, nearly of the length of the cup: the antheræ are didymous; the germen is roundish; the styles

are

are two, ſimple and reflex: the ſtigmata are ſimple; the fruit is a roundiſh capſule, having two cells; the ſeeds are two, oblong and angulated.

Theſe characters ſufficiently diſtinguiſh the Galenia, without a farther deſcription.

Claſs the Eighth. Order the Third.

OCTANDRIA TRIGYNIA.

Plants which have in every flower eight ſtamina and three ſtyles.

POLYGONUM.

THERE is no calyx, but the corolla has by ſome been called a calyx, and has a ſingular kind of green, thick ſubſtance, growing to it's outer part, much reſembling one: the corolla conſiſts of a ſingle petal, narrow at the baſe, and imperforated: the limb is open, and divided into five oval, obtuſe, permanent ſegments: the ſtamina are eight very ſhort, ſubulated filaments: the antheræ are roundiſh and incumbent; the germen is triquetrous; the ſtyles are three, very ſhort, and filiform; the ſtigmata are ſimple: there is no pericarpium, but the corolla remains, and ſurrounds the ſeed, which is ſingle, triquetrous, and acute.

Linnæus has of late been willing to include the Biſtorta, Helxine, and Perſicaria, all under this common genus; they are, indeed, all nearly allied, but it appears much more eligible to keep them ſeparate, as there are evident characters, though but ſmall ones, to ſupport the diſtinction.

POLYGONUM. Knot-graſs.

There is ſcarce any known plant which varies ſo extremely from it's uſual appearance as the Polygonum, under the accidents of more or leſs nouriſhment, and other ſuch variations of circumſtances; it has been, from this, deſcribed under the names of ſeveral different ſpecies by authors, but is in reality one and the ſame plant under them all. It's root is fibrous and white; the ſtalks are numerous, round, jointed, and tough; the leaves ſtand alternately, and are naturally of a figure approaching to oval, but lanceolated at the end; they are, however, ſometimes broader and roundiſh, ſometimes oblong, ſometimes very narrow, and ſometimes remarkably ſhort. Theſe varieties have given occaſion to four imaginary ſpecies, under the names of, 1. Polygonum lato ſubrotundo folio. 2. Polygonum anguſtis foliis. 3. Polygonum brevi anguſtoque folio; and, 4. Polygonum anguſto oblongo folio: any of theſe will, however, by culture, be reduced to the primitive appearance, and all will appear alike: the flowers in all are ſmall; they ſtand in the alæ of the leaves, without pedicles, and are of a pale reddiſh colour.

It is very common in all our uncultivated places.

PERSICARIA.

THERE is no calyx, unleſs, as ſome have done, we call the corolla by that name: the corolla is permanent, and is divided into five oval, obtuſe, hollow, erect, and alternately connivent ſegments: the ſtamina are often only five filaments, of a ſubulated figure: the antheræ are ſimple; the germen is roundiſh; the ſtyle is bifid, and the ſtigmata are obtuſe; there is no pericarpium, but the corolla remains, and ſurrounds and incloſes the ſeed, which is ſingle, of an oval figure, and compreſſed.

There is great irregularity in this genus, both in regard to it's claſs, and to itſelf, in the ſeveral ſpecies. The number both of the ſtamina and ſtyles is uncertain: the ſtamina are in ſome five, and longer than the corolla, with a ſingle ſtyle; in others they are ſix, ſhorter than the corolla, and the ſtyle double; in others they are eight; and, in ſome, the corolla is divided only into four ſegments, the lower one reflex. If to this it be added that ſeveral of the ſpecies vary extremely in their manner of growing, and have thence been deſcribed each under the names of ſeveral different ſpecies, it will appear that no genus of plants, either from nature or art, has been ſo much ſubject to error and confuſion.

1. *Perſicaria floribus hexandris digynis.* **Spotted Arſmart.**
The Perſicaria, with flowers with ſix ſtamina and two ſtyles.

The root is fibrous; the ſtalks are numerous, thick, round, ſucculent, jointed, and two feet high: the leaves ſtand ſingly at the joints; they are three inches long, an inch, or more, in breadth, and pointed at the end: the flowers ſtand in cluſters, or ſhort ſpikes, on the extremities of the branches; they are ſmall and reddiſh: the leaves are uſually ſpotted in the middle, with a large black ſpot; ſometimes they want this; and in ſome plants it is roundiſh, in others in form of a creſcent; the flowers are alſo ſometimes white. Theſe and other as trivial and accidental variations have been deſcribed as diſtinct ſpecies by many authors. The plant, in it's common ſtate, is called by C. Bauhine and others, Perſicaria mitis and Maculoſa.

It is common every-where with us about ditches, and on dunghils.

2. *Perſicaria floribus hexandris ſemidigynis.* **Sharp Arſmart.**
The Perſicaria, with hexandrous, ſemidigynous flowers.

The root is oblong, ſlender, white, tough, and fibrated: the ſtalks are numerous, round, ſlender, green, and a foot and half high: the leaves ſtand alternately; they are three inches long, near an inch broad, pointed at the ends, and of a pale green: the flowers ſtand in long ſlender ſpikes, at the extremities of the branches. The whole plant is of an acrid taſte, the other is mild.

This is common with us about waters, and in various places puts on very different forms, appearing larger or ſmaller, erect or procumbent, &c. in theſe it has been deſcribed under the names of many different ſpecies. In it's common ſtate, C. Bauhine calls it, Perſicaria urens, ſive Hydropiper.

Of the other more certainly diſtinct ſpecies are, 1. The willow-leaved Perſicaria. 2. The perennial, ſhrubby Perſicaria. 3. The narrow-leaved, ſhrubby Perſicaria. 4. The Perſicaria, with leaves woolly underneath. 5. The procumbent, long-ſpiked Perſicaria.

BISTORTA.

THERE is no calyx; the corolla conſiſts of a ſingle petal, narrow and imperforated at the baſe: the limb is erect, and divided into five oval, and alternately connivent ſegments: the ſtamina are eight ſubulated filaments, longer than the corolla; the antheræ are roundiſh, ſmall, and incumbent: the germen is triquetrous; the ſtyles are three, very ſhort and filiform, and the ſtigmata are ſimple: the flower remains, and ſupplies the place of a pericarpium, ſurrounding the ſeed, which is ſingle, triquetrous, and acute.

1. *Biſtorta foliis ovato-oblongis acuminatis.* **Biſtort.**
The Biſtort, with ovato-oblong, acuminated leaves.

The root is thick, oblique, and variouſly contorted, blackiſh on the ſurface, and reddiſh within: the leaves are three inches long, and near two in breadth; they ſtand on long pedicles, edged with narrow, foliaceous appendages, and are of a deep green on the upper ſide, and whitiſh underneath: the ſtalk is round, ſlender, jointed, and two feet high: the leaves ſtand alternately on it, and at it's top is a ſpike of flowers, ſhort, thick, and very beautiful: the flowers are ſmall, and of a beautiful red.

It is a native of England, but not common; ſome meadows near Lambeth abound with it. C. Bauhine calls it, Biſtorta radice minus intorta; others, Biſtorta major. It's root is a good aſtringent, and is much uſed in the ſhops.

2. *Biſtorta foliis lanceolatis* **Small Biſtort.**
The lanceolated-leaved Biſtort.

The root is oblong, thick, oblique, and variouſly contorted, black on the ſurface, and white within: the radical leaves are broad and ſhort; thoſe on the ſtalks are three

or

or four inches long, not half an inch broad, and of a lanceolated figure: the ſtalk is ſlender, round, jointed, and ſix inches high; the leaves ſtand alternately on it; at the top ſtands a thin ſpike of whitiſh flowers.

It is found in the North of England. C. Bauhine calls it, Biſtorta Alpina media; J. Bauhine, Biſtorta minima; and others, Biſtorta ſobolifera.

HELXINE.

THERE is no calyx: the corolla is permanent; it conſiſts of a ſingle petal, divided into five obtuſe, erecto-patent ſegments: the nectarium conſiſts of eight oval, coloured, very ſhort granules: the ſtamina are eight ſubulated filaments, of the length of the corolla: the antheræ are roundiſh and incumbent: the germen is triquetrous; the ſtyles are three, ſimple, and of the length of the ſtamina: the ſtigmata are capitated; the corolla remains and performs the office of a perianthium, ſurrounding the ſeed, which is ſingle, triquetrous, and acute.

This genus comprehends the Tragopyrum of authors, and ſome of the Perſicariæ of the ſame.

1. *Helxine caule erecto inermi, foliis cordato-ſagittatis.* **Buck-Wheat.**
The erect Helxine, with cordato-ſagittated leaves.

The root is oblong, creeping, and fibrated: the ſtalk is ſingle, round, ſmooth, ſolid, ramoſe, and two or three feet high: the leaves ſtand on long pedicles near the bottom of the ſtalk; higher up they have ſcarce any; they are two inches and a half long, an inch and half broad, and of a deep green, cordated at the baſe, and pointed at the extremity: the flowers ſtand in a kind of lax ſpikes, on pedicles, an inch, or two, in length; they are ſmall, and of a purpliſh white.

It is a native of Germany. Dodonæus calls it, Tragopyrum; Tournefort, Tragopyrum vulgare erectum; and C. Bauhine, Eryſinum vulgare folio hederaceo. We cultivate it in fields for the ſeeds, which are good food for many animals.

2. *Helxine caule volubili.* **Black Bindweed.**
The voluble-ſtalked Helxine.

The root is ſlender, yellowiſh, and tough; the ſtalks are round, weak, ramoſe, and two feet long, but they ſupport themſelves, by twiſting about every thing they come near: the leaves ſtand ſingly, at conſiderable diſtances; they are an inch and half long, near an inch broad, and of a yellowiſh-green: the flowers are ſmall and whitiſh; they ſtand in looſe ſpikes, or oblong cluſters.

It is common in our corn-fields. Tournefort calls it, Tragopyrum vulgare ſcandens; J. Bauhine, Helxine ſemine triangulo; C. Bauhine, Convolvulus minor ſemine triangulo.

3. *Helxine foliis ovatis, caule recto inermi.* **Oriental Arſmart.**
The oval-leaved, erect Helxine.

This is an extreamly beautiful plant, and has ſo much of the external appearance of the perſicariæ, that it is not wonderful that it has been generally ranked among them. It's root is fibrous and white; it's ſtalk round, jointed, and ſix or ſeven feet high: it's leaves are ten inches long, and five broad, pointed at their ends, and of a deep green; the flowers are large, and of a beautiful bright purple; they ſtand in large, long ſpikes at the extremities of the branches.

It is a native of the Eaſt; but we have it frequently in our gardens. Tournefort calls it, Perſicaria orientalis nicotianæ folio, calycibus purpureis.

The other ſpecies of Helxine are, 1. The rough-fruited Helxine. 2. The Aſiatic, cereal Helxine. 3. The ramoſe, lanceolate-leaved Helxine, called long-leaved, racemous Arſmart; and, 4. The ſhrubby Helxine, called the ſhrubby mountain Dock.

PAULLINIA.

THE calyx is a permanent perianthium, compoſed of four oval, patent leaves: the corolla conſiſts of four oblong petals, of an obverſely oval figure, patent, and twice as large as the cup: the ſtamina are eight ſhort, ſimple filaments; the antheræ are ſmall; the germen is turbinated, triquetrous, and obtuſe; the ſtyles are three, ſhort and filiform: the ſtigmata are ſimple and patent: the fruit is a large triquetrous capſule, formed of three valves, and containing three cells: the ſeeds are ſingle, and of an oval figure.

This genus comprehends the Seriana and the Cururu of Plumier; in the Seriana, the capſule carries the ſeed at the baſe; in the Cururu, at the apex. They are Americans, deſcribed by Plumier.

CARDIOSPERMUM.

THE calyx is a permanent perianthium, compoſed of four obtuſe, hollow leaves, alternately larger; the corolla conſiſts of four petals, obtuſe, but terminated by a kind of point; they ſtand alternately with the larger leaves of the cup: the nectarium is very ſmall, and ſurrounds the germen; it is compoſed of four leaves, narrow at the ungues, obtuſe, and pointed at the extremities; two of them form an erect lip: the ſtamina are eight ſubulated filaments, ſcarce longer than the cup; three of them ſtand oppoſite to three others, and the remaining two on the ſide: the antheræ are ſmall: the germen is triquetrous; the ſtyles are three, and ſhort; the ſtigmata are ſimple: the fruit is a roundiſh, trilobated, and inflated capſule; it contains three cells, and opens at the extremity: the ſeeds are ſingle, globoſe, and marked with a heart at the baſe. This genus comprehends the Corindum and Veſicaria of authors.

There is only one known ſpecies of it.

CARDIOSPERMUM.

The root is large, thick, and fibrated; the ſtalks are weak, ſlender, ſtriated, and ſupport themſelves bymeans of any thing ſolid in their way; they grow to three feet long: the leaves are divided into ſometimes three, ſometimes five lobes; theſe are oblong and ſerrated: the flowers are large and white: the fruit is inflated like the bladder of the winter cherry, and as large as a walnut: the ſeeds are large and black, the cordated ſpot white.

It is a native both of the Eaſt and Weſt Indies. C. Bauhine calls it, Piſum veſicarium fructu nigro alba macula notato.

SAPINDUS.

THE calyx is a patent perianthium, compoſed of four plane, oval, coloured, deciduous leaves: the corolla is ſmaller than the calyx, and conſiſts of four oval petals: the ſtamina are filiform; the germen is triangular; the ſtyles are three, and ſhort; the ſtigmata are ſimple: the fruit conſiſts of three globoſe, inflated capſules, adhering together: the ſeed is a round nut. The three capſules, however, ſeldom all come to perfection; two of them are uſually abortive.

Class the Eighth. Order the Fourth.

OCTANDRIA TETRAGYNIA.

Plants which have in every flower eight stamina and only four styles.

PARIS.

THE calyx is a permanent perianthium, composed of four patent, acute, lanceolated leaves, of the bigness of the flower: the corolla consists of four oblong, plane, patent petals: the stamina are eight subulated filaments; the antheræ are long and erect: the germen is round and marked with four faint angles: the styles are four, patent and shorter than the stamina; the stigmata are simple: the fruit is a berry of a globose, tetragonal form, containing four cells, and standing in the cup: the seeds are numerous, and arranged in a double series.

This genus comprehends the Herba Paris of authors.

1. *Paris foliis quaternis.* Herb Truelove.
The four-leaved Paris.

The root is oblong, slender, jointed, and creeping. The stalk is round, firm, and six or eight inches high. Near it's top there stand four leaves, sometimes five, very rarely more; these are three inches long, an inch broad, and of a lanceolated figure, rough to the touch, and not indented about the edges: the flower is large and white; the berry black, when ripe.

It is found in many of our woods. C. Bauhine calls it, Solanum quadrifolium bacciferum; others in general, Herba Paris.

2. *Paris foliis ternis.* The lesser Herb Truelove.
The three-leaved Paris.

The number of leaves on the stalk in this plant would not be enough to characterise a different species from the former; but there are, beside these, sufficiently certain and obvious distinctions: the root is small, creeping, and reddish; the stalk very slender and weak; the leaves are never more than three; they are about three inches long, and three quarters of an inch in breadth, of a pale green, and even at the edges: the flower is small and white, and it's petals of an oval figure, and larger than the leaves of the cup: the stamina also are only six in number; and the petals of the flower, and all the other parts, a fourth less in number than in the other; so that it almost runs away from the very genus. Authors in general, fond enough of making species out of varieties, have ranked this species as a variety.

ADOXA.

THE calyx is a perianthium, plane, divided into two parts, permanent, and placed below the germen: the corolla is plane, and composed of a single petal, divided into four oval, acute segments, larger than the cup: the stamina are eight subulated filaments, of the length of the cup: the antheræ are roundish; the germen is simple; the styles are four, simple, erect, permanent, and of the length of the stamina; the stigmata are simple: the fruit is a globose berry, situated between the calyx and corolla; the calyx adheres to it's under part: the berry is umbilicated, and contains four cells: the seeds are single and compressed. This is the fructification of the terminatory flower; the lateral ones all add a fifth to the number of the parts.

Of this genus there is only one species.

ADOXA. **Tuberous Moſchatel.**

The root is thick, white, and jointed; the leaves are compoſed of a number of oblong ſegments, arranged into a kind of tripartite order, on a long pedicle: the ſtalk riſes to about the height of the leaves, that is, to two or three inches; it is very ſlender and delicate, of a pale green, and ſmooth; about it's middle ſtand two leaves oppoſite to one another, like the radical ones, but ſmaller, and placed on ſhort pedicles: at the top ſtands a kind of ſquare head, ſmall, of a yellowiſh-green, and compoſed of five little flowers.

It is common in our woods. C. Bauhine calls it, Raunuculus nemorum Moſchatellina dictus; others, Moſchatellina foliis fumariæ bulboſæ.

ELATINE.

THE calyx is a perianthium, compoſed of four roundiſh, plane, permanent leaves, of the bigneſs of the flower: the corolla conſiſts of four ſeſſile, oval, obtuſe, patent petals: the ſtamina are eight filaments, of the length of the corolla; the antheræ are ſimple: the germen is large, orbiculated, and ſomewhat compreſſed: the ſtyles are four, erect, parallel, and of the length of the ſtamina; the ſtigmata are ſimple: the capſule is large, orbiculated, of a globoſe figure, but depreſſed; it is formed of four valves, and contains four cells: the ſeeds are numerous, lunated, erect, and ſurround the receptacle in a rotatory manner.

This genus comprehends the Potamopithys of Buxbaum, and the Alſinaſtrum of Vaillant.

Elatine foliis oppoſitis.

The oppoſite-leaved Elatine.

The root is a cluſter of white, long, and moderately thick fibres: the ſtalks are numerous, round, ſmooth, weak, and ſix inches long; the leaves are of an oval figure, a quarter of an inch, or more, in length, and nearly as much in breadth: the flowers are ſmall and white.

This is a native of moſt parts of Europe; it grows in watery places. Vaillant calls it, Alſinaſtrum ſerpyllifolium flore albo tetrapetalo.

Claſs the Eighth. Order the Fifth.

OCTANDRIA POLYGYNIA.

Plants which have in every flower eight ſtamina and a great number of ſtyles.

Of this order there is only one known genus.

MICHELIA.

THE calyx is a deciduous perianthium, compoſed of eight obtuſe, lanceolated leaves: the corolla is ſmaller than the calyx, and conſiſts of eight lanceolated, acute petals: the ſtamina are eight ſubulated filaments, ſhorter than the corolla; the antheræ are acute: the germina are numerous, and formed into a kind of ſpike; there are no ſtyles: the ſtigmata are reflex; the fruit conſiſts of a number of globoſe berries, equal to that of the germina, and arranged into a cluſter. Theſe berries contain each a ſingle cell only, and in this are four ſeeds, convex on one ſide, and angular on the other. It is an oriental, deſcribed in the Hort Malab. 1. 19.

Class the Ninth.

ENNEANDRIA.

Plants which have in every flower nine stamina.

OF this class there are only four genera; one of these is of the monogynous kind, having only a single style; two are of the trigynous, and the remaining one hexagynous.

Class the Ninth. Order the First.

ENNEANDRIA MONOGYNIA.

Plants which have nine stamina and only one style in the flower.

LAURUS.

THERE is no calyx: the corolla much resembles a calyx, and has been mistaken for one; it consists of six erect, hollow, ovato-acuminated petals, alternately exterior. The nectarium is composed of three coloured, acuminated tubercles, terminating each in two hairs, and standing round the germen: the stamina are nine filaments, shorter than the corolla, compressed, obtuse, and placed in three's: the antheræ adhere to the edge of the upper part of the filaments on each side, and there are two globose corpuscles affixed by a very short filament to each of the stamina of the inner series, near the base: the germen is oval; the style is simple, equal, and of the length of the stamina: the stigma is obtuse and oblique: the fruit is a drupe of an oval, acuminated figure, containing only one cell, and contained in the corolla: the seed is a single, ovato-acuminated nut; it's kernel of the same figure.

This genus comprehends the Laurus of Tournefort; and the Cinnamomum, Camphora, Persea, Borbonia, Benzoe, and Sassafras of others.

The greater number of the species of this genus, the cinnamon-tree, camphire-tree, &c. are of the hermaphrodite kind; but some, as the common bay, have the male flowers on separate trees: in this case the stamina vary in number from eight to fourteen, and the corolla is naked, and divided into four parts. The little bodies, adhering to some of the filaments, are the great characteristics of the genus.

1. *Laurus foliis lanceolatis venosis perennantibus, corollis quadrifidis.* The Bay-tree.
The Laurus, with lanceolated, perennial leaves, and quadrifid corollæ.

The root is strong, woody, and divaricated: the shrub usually ten or twelve feet high; sometimes, however, it rises with a single trunk to the bigness of a tree. The leaves are hard, rigid, of a deep green, three inches long, and two broad; they stand thick and close: the flowers are small, and of a whitish yellow: the berries large, oblong, and black, when ripe.

It is a native of Italy; we have it in our gardens, almost every-where; it's berries are an excellent carminative, and much used in medicine.

2. *Laurus foliis oblongo-ovatis trinerviis, nitidis, planis.* The Cinnamon-tree.
The oblongo-ovate, trinervous, plane-leaved Laurus.

The root is large and brachiated; the bark of it greyish without, reddish within, and smells strongly of camphire: the trunk is large, and the tree grows to a great height, and is very ramose: the leaves stand irregularly; they are of an oval figure, four inches long, thick, of a bright green, and supported on pedicles of half an inch long, thick and furrowed: the flowers are small and white; they stand in clusters on the extremities of the branches, and are of a very fragrant smell.

It

It is a native of Ceylon, where it is as common as any tree we have here. It's ſecond, or under bark, is the Cinnamon of ſuch uſe as an aſtringent, &c.

3. *Laurus foliis ovatis, utrinque acuminatis, trinerviis, nitidis, petiolis laxis.*
The Laurus, with oval, gloſſy leaves, on lax pedicles.

The Camphire-tree.

The root is large, thick, and brachiated; the trunk often three feet in diameter; the height of the tree that of our higheſt elms; it is very ramoſe, it's bark greyiſh, and rough on the trunk, but green on the young branches. The wood is white, but grows reddiſh in drying. The leaves ſtand irregularly, and much reſemble thoſe of the common bay-tree; they are more than three inches long, an inch and a half broad, ſomewhat curled about the edges, and terminate in a very long and narrow point; they are of a bright green on the upper ſurface, and of a greyiſh green underneath, and ſtand on pedicles of an inch long, ſomewhat hollowed. The flowers are very ſmall, and white; they ſtand in cluſters, on the tops of ramoſe pedicles, riſing from the alæ of the leaves: the fruit is a black ſhining berry.

It is a native of many parts of the Eaſt. Breynius calls it, Arbor Camphorifera Japonica foliis laurinis, fructu parvo globoſo, calyce breviſſimo.

The Camphire of the ſhops is prepared from the wood of this tree by a coarſe kind of ſublimation; all the parts of the tree ſmell ſtrongly of it.

4. *Laurus foliis enervibus, obverſe ovatis, utrinque acutis, integris, annuis.*
The Laurus, with deciduous leaves, without ribs, of an obverſely oval figure.

The Benjamin-tree.

The root is brachiated; the trunk two feet, or more, in diameter; the whole tree very tall, and ramoſe. The leaves are four inches long, and two and a half broad, largeſt at the further end, and of a pale green colour on the upper ſide, and whitiſh underneath. The flowers are very ſmall, and yellow; they ſtand in little cluſters: the fruit is large.

It is a native of the Eaſt and Weſt Indies. Many of the late writers have called it, Arbor limonii folio benzoinum fundens.

5. *Laurus foliis integris et trilobis.*
The Laurus, with undivided and trilobate leaves.

The Saſſafras-tree.

The root is brachiated, very long, and ſpreading, but not penetrating deep into the ground. The trunk is ſingle, moderately thick, but not very high; the top ramoſe and ſpreading. The leaves ſtand irregularly on the branches, and are green all the year; the young ones are of an oval figure, undivided, and obtuſely pointed at the extremity; the others are divided into three lobes each, and reſemble, in ſome degree, thoſe of the fig; they are of a duſky green on the upper ſide, and whitiſh underneath. The flowers ſtand in cluſters, on long pedicles; they are ſmall, and are ſucceeded by berries, of the ſhape and ſize of thoſe of the bay.

It is a native of America; we have it in our gardens. C. Bauhine calls it, Saſſafras arbor ficulneo folio.

The bark is an excellent diaphoretic and attenuant, and is in great eſteem, as is alſo the wood.

Class 8 & 9. Octandria & Enneandria.

8

9

Michelia

Butomus

Tropæolum

Cardiospermium

Adoxa

Hekxine

Laurus

Anothera

Daphne

Sapindus

Paris

Bistata

Rheum

B. Cole Sculp

Class the Ninth. Order the Second.

ENNEANDRIA TRIGYNIA.

Plants which have in each flower nine stamina and three styles.

SPONDIAS.

THE calyx is a permanent perianthium, formed of a single leaf, divided into five segments at the edge: the corolla consists of five oval, plane, patent petals: the stamina are nine filaments; five of them stand in a circular order, the rest are equal in length to them and to the cup: the antheræ are simple; the germen is oval; there is scarce any style; the stigmata are three, obtuse, and permanent: the fruit is a berry, of an oval figure; the seeds are four in every cell of the berry.

It is an American, described by Plumier under the name of Monbin.

RHEUM.

THERE is no calyx; there are, indeed, a few partial, vague spathæ, but they are not to be called by that name: the corolla consists of a single petal, which is narrow at the base, and impervious: the limb is divided into six obtuse segments, alternately smaller: the stamina are nine capillary filaments, inserted into the corolla, and of the same length with it: the antheræ are didymous, oblong, and obtuse: the germen is short and triquetrous; the styles are scarce visible; the stigmata are reflex and plumose; there is no pericarpium: the seed is single, large, triquetrous, acute, and surrounded with membranaceous rims.

This genus approaches nearly to the docks, or rumices, in many respects, but is extremely different in others.

Of this genus there is only one known species.

RHEUM. The Rhapontic Plant.

The root is large and brachiated; the radical leaves are of a roundish figure, a foot in diameter, of a strong green colour, marked with large longitudinal ribs, and placed on long pedicles. The stalk is large, thick, striated, hollow, and two feet high; the leaves stand alternately on it, at considerable distances, and are large and roundish, but somewhat pointed. The flowers are small and white, and are placed in vast clusters together.

It is a native of Thrace and Scythia; we have it in some gardens. Prosper Alpinus calls it, Rhaponticum; Morison and others have made it a species of Dock, but erroneously: Tournefort first declared it to be a distinct genus, and Linnæus has followed him.

It's root is the Rhapontic of the shops, the true Rha, or Rheum, of Dioscorides, and the rest of the antients, for they were not acquainted with our rhubarb. This root purges more gently than rhubarb, but is a more powerful astringent: it ought to be more known in the shops than it is at present.

Class the Ninth. Order the Third.

ENNEANDRIA HEXAGYNIA.

Plants which have in every flower nine stamina and six styles.

Of these there is only one known genus.

BUTOMUS.

THE calyx is a common involucrum, short, and composed of three leaves: the umbel is simple: the corolla consists of six roundish, hollow, fading petals, alternately exterior, smaller, and more acute: the stamina are nine subulated filaments; six of them are placed exteriorly: the antheræ are bilamellated: the germina are six, oblong and acuminated: the styles are as many: the stigmata are simple: the fruit consists of six oblong and gradually attenuated capsules, erect, formed each of a single valve, and opening inwards: the seeds are numerous, of an oblong, cylindric form, and obtuse at both ends.

Of this genus there is only one known species.

BUTOMUS. **The flowering Rush.**

The root is oblong, thick, and divided, part penetrating into the mud, part creeping upon, or but just under, the surface of it. The radical leaves are numerous, a foot long, of a triangular figure, and dusky green colour. The stalk is round, thick, naked, and two feet high; at it's top stand ten or fifteen large, beautiful, reddish-white flowers, in a kind of umbel.

It is common with us about waters. C. Bauhine calls it, Juncus floridus major; others, Juncus floridus.

Class the Tenth.

DECANDRIA.

Plants which have in each flower ten stamina.

OF the Decandria some have only one style, some two, some three, some five, and some ten. The genera of this class are, therefore, to be arranged into five orders, under the names of Monogynia, Digynia, &c.

Class the Tenth. Order the First.

DECANDRIA MONOGYNIA.

Plants which have in every flower ten stamina and only one style.

THE genera comprised within the limits of this order are very numerous, but there is an obvious distinction among them, some having the stamina declinated, others erect; according to this, therefore, they may be conveniently arranged into two divisions.

Class the Tenth. Order the First.

Division the First.

Decandria Monogynia, with declinated stamina.

SOPHORA.

THE calyx is a short perianthium, formed of a single leaf, and of a campanulated figure; it's base is gibbous upwards; it's rim is divided into five segments, oblique and obtuse: the corolla is of the papilionaceous kind, and composed of five petals: the vexillum is oblong, gradually broader, strait, and it's edges reflex: the alæ are two, oblong, of the length of the vexillum, and appendiculated at the base: the carina is formed of two petals, like the alæ, with their lower edges approximated, and is of a navicular figure: the stamina are ten distinct, parallel, subulated filaments, of the length of the corolla, and buried in the carina: the antheræ are very small, and assurgent: the germen is oblong and cylindric: the style is of the size and situation of the stamina: the stigma is obtuse: the fruit is a very long, slender legumen, having only one cell, and nodose at the seeds; these are numerous and roundish.

There is but one known species of this genus. Dillenius makes it a species of Ervum. It agrees with diadelphous papilionaceous plants in all things, but that the stamina are distinct. These characters sufficiently distinguish it, without a farther description.

CERCIS.

THE calyx is an extremely short perianthium, of a campanulated figure, formed of one leaf, gibbous below, and containing a honey juice; it's rim divided into five segments, erect and obtuse: the corolla consists of five petals, inserted into the calyx, and greatly resembles a papilionaceous flower: the alæ are ten petals, bent upwards, and affixed to long ungues: the vexillum is a single petal, of a roundish figure, unguiculated, and placed under the alæ, which are inferior to it in length: the carina consists of two petals, which converge so as to form a cordated part, including the fructifications, affixed to the ungues: the nectarium is a glandule of a styliform figure, placed under the germen: the stamina are ten distinct, subulated filaments; four of them are longer than the rest, and covered: the antheræ are oblong, incumbent, and assurgent: the germen is of a lineari-lanceolate figure, affixed to a long style: the style is of the length and situation of the stamina: the stigma is obtuse and assurgent: the fruit is an oblong, obliquely-acuminated legumen, having only one cell: the seeds are roundish, and annexed to the upper suture.

This genus comprehends the Siliquastrum of authors.

1. *Cercis foliis cordato-orbiculatis glabris.* Judas-tree.
The Cercis, with smooth, cordato-orbiculated leaves.

The root is brachiated and spreading: the trunk moderately thick; it sometimes grows to the height and stature of a moderate tree, but more usually it has the appearance of a shrub. The branches are few, and purplish: the flowers appear early in spring, four, or more, together, in little clusters; they are moderately large, and of a beautiful purple. The leaves stand alternately; they are smooth, of a roundish figure, and three inches in diameter.

It is a native of Spain, France, and Italy; we have it in gardens. Dodonæus calls it, Arbor Judæ.

2. *Cercis foliis cordatis pubescentibus.* Canada Judas-tree.
The Cercis, with hoary, cordated leaves.

The root is brachiated and very long; the shrub fifteen feet high; sometimes, though rarely, it grows into a tree. The leaves stand alternately; they are roundish, of the size of a crown-piece, soft to the touch, and a little hairy; the flowers are of a pale red colour; the pods very long, and nodose.

It

It is a native of North America; we have it in ſome of our gardens. Tournefort calls it, Siliquaſtrum Canadenſe.

BAUHINIA.

THE calyx is a deciduous perianthium, of an oblong figure, opening longitudinally in it's under part, reclinate on one ſide, and opening into five parts at the baſe, the five leaves it is compoſed of cohering at their upper part: the corolla conſiſts of five lanceolated, undulated petals, their tops attenuated and reflex; the lower ones ſomewhat the larger, and ſtanding on ungues of the length of the calyx: the ſtamina are ten filaments, of which the nine ſuperior ones grow together, ſo as to form a cylindric body, opening below, and ſhorter than the corolla; the tenth, which ſtands below all the others, is very long: the antheræ are oval, and are often wanting on the nine conjunct filaments, never in the tenth: the germen is oblong, and ſtands on a pedicle: the ſtyle is filiform and declinate: the ſtigma is obtuſe and aſſurgent: the fruit is a long, cylindric legumen, having only one cell: the ſeeds are numerous, round, compreſſed, and run longitudinally along the pod.

1. *Bauhinia foliis cordato-ſubrotundis, lobis rotundatis.*
The roundiſh cordated-leaved Bauhinia, with rounded lobes.

The root is large, brachiated, and ſpreading. The tree grows to fifteen or twenty feet high, and is very ramoſe; the trunk is often eight inches in diameter; the leaves are an inch and a half long, and about as much in breadth, of a roundiſh figure, but cordated at their top, and the lobes that ſinuoſity divides them into of a roundiſh figure; they are of a pale green colour, ſoft to the touch, and of a ſtrong ſmell, when bruiſed. The flowers are large, and of a yellowiſh colour, and ſtriated.

It is a native of both the Eaſt and Weſt Indies. Burman calls it, Bauhinia folio ſubrotundo, flore flaveſcente ſtriato; others, Mandaru.

The other ſpecies are, 1. The purple-flowered, large-leaved Bauhinia, called St Thomas's-tree. 2. The broader and more deeply ſinuated-leaved, purple-flowered Bauhinia. 3. The white-flowered Bauhinia, with large leaves.

PARKINSONIA.

THE calyx is a deciduous perianthium, formed of a ſingle leaf, patent, and divided into five ſegments: the corolla conſiſts of five petals, nearly equal in ſize, placed in a circular direction, larger than the cup, and the four upper ones oval, the lower one reniform: the ſtamina are ten declinated filaments: the antheræ are oblong: the germen is long, cylindric, and declinate: the ſtyle is ſcarce viſible; the ſtigma is obtuſe and aſſurgent: the fruit is a very long, cylindric legumen, nodoſe at the ſeeds, and acuminated: the ſeeds are numerous, and are placed one within every protuberance of the legumen.

Of this genus there is but one known ſpecies. It is an American, deſcribed by Plumier.

CASSIA.

THE calyx is a deciduous perianthium, compoſed of five hollow, lax, coloured leaves: the corolla conſiſts of five hollow, roundiſh petals; the lower ones larger, and more diſtant than the others: the ſtamina are ten declinated filaments; the three lower longer than the reſt, the three upper ſhorter: the three lower antheræ are very large, and arcuated, terminating in a beak, and opening at the tops; the four lateral ones open without a beak; the three upper ones are very ſmall, and contain ſcarce any farina: the germen is cylindric, long, and pedunculated: the ſtyle is very ſhort; the ſtigma is obtuſe and aſſurgent: the fruit is an oblong legumen, divided by tranſverſe ſepta: the ſeeds are numerous, roundiſh, and affixed to the upper edges of the valves.

This genus comprehends the Caſſia and Senna of Tournefort, and the Chamæcriſta of Rivinus. In the Caſſia of authors the pod is oblong, and the valves, or ſepta, entire. In the Sena of authors the pod is gibbous and inflex.

1. *Caſſia*

1. *Caſſia foliolis quinque parium lanceolatis inferioribus rotundioribus.*

The Caſſia, with five pairs of lanceolated pinnæ, the lower ones rounder.

The Caſſia Fiſtula-tree.

This is a large and ſpreading tree. It's trunk is covered with a greyiſh outer bark, and, within that, a reddiſh one. The leaves are pinnated, and very large; the rib on which the pinnæ ſtand is fifteen inches, or more, in length; the baſe ſomewhat tumid, the colour green: there are uſually five or ſix pairs of the pinnæ on each rib; they are four or five inches long, two and a half broad, and terminate in a point; their baſe is rounded; they are thick, and of a deep green colour, and have ſome general reſemblance to the leaves of our walnut-tree. The flowers are large, and of a beautiful yellow colour; they ſtand on long pedicles, great numbers together, and each has it's own pedicle beſide, two inches long, and very ſlender; the pods which ſucceed theſe flowers are near two feet long, cylindric, woody, and contain, together with the ſeeds, a black, ſweet, pulpy matter, which is the Caſſia of the ſhops, an excellent, mild cathartic.

It is a native of Africa and the Eaſt Indies, but it has been long tranſplanted into America, where it thrives, as if it was native there. Bontius calls it, Arbor Caſſiam ſolutivam ferens; Van Rheede, Canna.

2. *Caſſia pinnis lanceolatis, fructu incurvo compreſſo.*

The crooked and compreſſed-fruited Caſſia, with lanceolated pinnæ.

The Sena Shrub.

The root is brachiated and ſpreading. The ſhrub grows to five or ſix feet high. The trunk is woody and hard; the branches are long, ſlender, and tough. The leaves are pinnated, and ſtand alternately; the rib is about an inch long; the pinnæ are four, five, or ſix pairs; there is no odd one at the end; the pinnæ are of a pale whitiſh-green, oblong, and of a lanceolated figure. The flowers ſtand in long ſeries, at the tops of the branches, and are moderately large, and yellow, ſtriped with reddiſh; the pods are compreſſed, and crooked.

It is a native of Perſia, and is cultivated in Syria and Arabia, whence the dried leaves are ſent to Alexandria, and thence diſtributed throughout the world. Authors call it, Sena, Sena orientalis, and Sena foliis acutis. It is in great uſe and repute as a purge.

The other ſpecies are, 1. The ſix-leaved Caſſia, with bicapſular pods. 2. The ſtinking Caſſia, with alated pods. 3. The dwarf Caſſia, with pods like fœnugreek. 4. The privet-leaved, Virginian Sena. 5. The hairy-podded Caſſia. 6. The many-podded Caſſia, called occidental Sena, and Chamæcriſta pavonis; and, 7. The little-flowered, Virginian, baſtard Sena.

POINCIANA.

THE calyx is an oblong, lax, hollow, deciduous perianthium, compoſed of five leaves, of which the lower one is larger than the reſt, and declinate: the corolla is formed of five petals, and is unequal; the four upper petals are roundiſh, and nearly equal; the fifth is larger, difform, and crenated: the ſtamina are ten extremely long, declinated, ſetaceous filaments: the antheræ are oblong: the germen is ſubulated, declinate, and long; it terminates in a ſtyle, of the length of the ſtamina, and the ſtigma is acuminated: the fruit is an oblong, compreſſed legumen, with ſepta: the ſeeds are ſingle, and are placed lengthwiſe in the pod.

Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

CÆSALPINIA.

THERE is no calyx: the corolla is of the ringent kind, formed of a ſingle petal: the tube is ventricoſe and ſubgloboſe: the limb is divided into four parts, of which the upper ſegment is twice as large as the reſt, concave, patent, and undi-

vided; the oppoſite ſegment to this is erecto-patent, and undivided; the lateral ones are equal, crenated, erect, and equal to the ſecond: the ſtamina are five very long, crooked, filiform filaments, and bend toward the larger ſegment: the antheræ are ſimple; the germen is ſlender and oblong; the ſtyle is ſimple, and of the length of the ſtamina; the ſtigma is capitated: the fruit is an oblong, acuminated legumen, containing one cell: the ſeeds are numerous and oval. We have the credit of Plumier for theſe characters, but they are monſtrous ones; probably there is ſome error: the ſtamina, in the courſe of nature, ought to be ten; there ought to be a cup, &c.

It is an American, deſcribed by Plumier.

GUILANDINA.

THE male flower has a deciduous perianthium, formed of one leaf, and lightly divided into five ſegments: the tube is cylindric, and marked with ten ſtriæ: the limb hollow; the ſegments linear: the corolla conſiſts of five lanceolate, hollow, ſeſſile, equal petals, inſerted into the mouth of the calyx, their extremities reaching beyond it's verge: the ſtamina are ten erect, ſubulated filaments, alternately ſhorter, inſerted into the calyx, and longer than it: the antheræ are obtuſe and incumbent: the fruit ſucceeding the female flower is a legumen of a rhomboidal form, with it's upper ſuture convex, ſmooth, ventricoſe, yet compreſſed, containing only one cell, divided by tranſverſe valves into many partitions: the ſeeds are numerous, oſſeous, of a globoſe, compreſſed figure, and are lodged ſingly between the valves.

Guilandina aculeata foliolis ovalibus cum acumine. The Bonduc.
The prickly Guilandina, with oval-pointed leaves.

The root is long, ſpreading, and full of fibres. The ſhrub grows to ſix or eight feet high; the young ſhoots are green, the older branches browniſh; the whole ſhrub is very thick ſet with thorns. The leaves are pinnated; the pinnæ are ſmall, of a roundiſh, or oval, figure, but pointed, and a great number of pairs of them ſtand along the middle rib, at the bottom of which are placed two reddiſh ſpines, bending downward. The leaves ſtand in pairs on the branches, and, from their alæ, ariſe pedicles, on which the flowers ſtand in ſpikes; they are moderately large, and yellow. The fruit, when ripe, is bluiſh.

It is a native of the Eaſt and Weſt Indies. Plumier calls it, Bonduc vulgare minus polyphyllum.

GUAIACUM.

THE calyx is a deciduous perianthium, hollow, compoſed of one leaf, divided into five ovato-oblong ſegments: the corolla conſiſts of five petals, hollow, patent, of an ovato-oblong figure, inſerted into the calyx, and the upper ones ſmaller than the others: the ſtamina are ten erect filaments, inſerted into the calyx: the antheræ are ſmall; the ſtyle is filiform, ſtrait, and long: the germen is ovato-acuminated; the ſtigma is ſlender and ſimple: the fruit is a roundiſh, obliquely-acuminated drupe, furrowed on one ſide; the ſeeds are oval nuts, covered with pulp.

1. *Guaiacum fructu ſubrotundo.* The great Guaiacum-tree.
The round-fruited Guaiacum.

The root is brachiated and long; the tree grows to the height of our aſh. It's trunk is often two feet in diameter: the branches are long and knotty; the leaves ſtand in pairs, and are pinnated; each is compoſed of four leaves; two at the top, or extremity, of the ſtalk, two about the middle; they are roundiſh, an inch and a half long, and an inch broad, firm in their texture, of a pale green colour, and without pedicles. The flowers ſtand in cluſters at the tops of the branches; they are large, and of a beautiful blue colour. The fruit is roundiſh, hollowed, and red.

It is a native of the American iſlands. Plumier calls it, Guaiacum flore cæruleo, fructu ſubrotundo.

2. *Guaiacum fructu tetragono.* The leſſer Guaiacum-tree.
The ſquare-fruited Guaiacum.

The root is brachiated; the trunk a foot, or more, in diameter, and the tree moderately tall. The leaves are pinnated, but they conſiſt of more pinnæ than thoſe of the former; four or five pairs are frequent on the ſtalk, or rib, and yet this is ſeldom more than two inches long; they are ſmall, and pointed at the ends. The flowers ſtand in cluſters, and are large, very beautiful, of a bright blue colour, and fimbriated round the edges. The fruit is yellow, and of a quadrangular figure, ſomewhat like that of our enonymus.

This is a native of St Domingo, and ſome other parts of America. Plumier calls it, Guaiacum flore cæruleo fimbriato, fructu tetragono.

The wood of both ſpecies is indifferently ſent over to us under the name of Guaiacum; and, on wounding the trees of either kind, the ſame acrid reſin flows out.

CYNOMETRA.

THE calyx is compoſed of a ſingle leaf, divided into four parts; two of the ſegments are longer than the others, and placed oppoſite: the fruit is a fleſhy, lunated legumen, or pod, containing a ſingle ſeed.

Theſe characters ſufficiently diſtinguiſh the Cynometra, without a farther deſcription.

ANACARDIUM.

THE calyx is a deciduous perianthium, compoſed of one leaf, divided into five parts, erect and acuminated: the corolla conſiſts of a ſingle petal: the tube is very ſhort; the limb is divided into five lanceolated, reflex ſegments, longer than the cup: the ſtamina are two capillary filaments, of the length of the corolla: the antheræ are ſmall; the germen is roundiſh: the ſtyle is ſubulated, inflex, and of the length of the corolla: the ſtigma is acute: the receptacle is very large, fleſhy, and of a turbinated, oval figure: the ſeed is a large nut, of a kidney-like ſhape, placed at the extremity of the receptacle.

This genus comprehends the Acajou of Tournefort. There is only one known ſpecies of it; the fruit called Anacardium in the ſhops is of another genus.

ANACARDIUM. The Caſhew-nut.

The root is large and brachiated; the tree grows to twenty or thirty feet high, and is very ramoſe and ſpreading. The leaves ſtand very thick on the branches; they are of a kind of oval figure, five inches long, and about three broad; they ſtand on ſhort pedicles, and are ſmooth, tough, and of a bright ſhining green colour on both ſurfaces. The flowers are ſmall, and grow in a kind of umbels, at the tops of the branches. The fruit is a nut of a kidney-like ſhape, and about three quarters of an inch long; it ſtands on the extremity of a fleſhy receptacle, of the bigneſs of a large pear; of a mixed yellow and purple colour, and of a ſweetiſh, but ſomewhat auſtere, taſte: the nut at the end of this has a double rind, and, in the interſtice between, contains a yellow, cauſtic, oily liquor; within there is a white, eſculent kernel.

It is a native of the hotter parts of America. C. Bauhine calls it, Anacardii altera ſpecies.

DICTAMNUS.

THE calyx is a very ſmall, deciduous perianthium, compoſed of five leaves, of an oblong, acuminated figure: the corolla conſiſts of five petals, of an ovato-lanceolate figure, acuminated, unguiculated, and unequal; three of them are turned upwards, and two are placed obliquely at the ſides; the ſtamina are ten ſubulated filaments, of the length of the corolla, placed between the two lateral petals, declinated, and unequal: the antheræ are quadrangular and aſſurgent: the germen is quadrangular; the ſtyle is ſimple, ſhort, declinated, and crooked: the ſtigma is acute and aſſurgent: the fruit is compoſed of five capſules, growing together by their inner ſides; they are compreſſed,

compreſſed, acuminated, diſtant at the tops, and formed of two valves: the ſeeds are numerous and turbinated.

Of this genus there is only one known ſpecies.

DICTAMNUS. Fraxinella.

The root is perennial, long, and white: the ſtalk is round, hairy, glutinous to the touch, and often of a purpliſh colour: the leaves are pinnated and large; they ſtand alternately on the ſtalks, and are compoſed each of three or four pairs of oval, pointed pinnæ, annexed to a middle rib, with an odd leaf at the end. The tops of the ſtalks are formed into a kind of ſpikes, of large and very beautiful flowers; they are uſually red, ſometimes white. The pedicles are hairy, and covered with a ſoft, reſinous matter, very fragrant, and ſo inflammable, that, if a candle be brought near it, the whole upper part of the plant is on fire in an inſtant.

It is a native of France and Germany, and is frequent in our gardens. It's root is the radix fraxinellæ of the ſhops, much recommended as a cephalic. C. Bauhine calls it, Dictamnus albus ſive Fraxinella; others only Fraxinella. The Dictamnus Creticus is of another claſs.

Claſs the Tenth. Order the Second.

Diviſion the Second.

Decandria Monogynia, with the ſtamina erect.

TOLUIFERA.

THE calyx is a perianthium of a campanulated figure, compoſed of a ſingle leaf, divided into five nearly equal ſegments, one only more remote than the others. The corolla conſiſts of five petals inſerted into the receptacle; four of them are equal and linear, and ſomewhat longer than the cup; the fifth is twice as large as the others, obverſely cordated, and it's unguis is of the length of the cup: the ſtamina are ten very ſhort filaments; the antheræ are longer than the calyx: the germen is oblong; there is ſcarce any viſible ſtyle; the ſtigma is acute; the fruit is hitherto unknown.

Of this genus there is only one known ſpecies, which is the tree that produces the balſam of Tolu of the ſhops, and is ſufficiently diſtinguiſhed by theſe characters, without a farther deſcription.

MONOTROPA.

THERE is no calyx. The corolla conſiſts of ten oblong, deciduous petals, parallello-erect, and ſerrated at their tops; the alternately exterior ones have gibboſe baſes, hollowed on their ſides, and full of a honey juice: the ſtamina are ten, erect, ſubulated filaments; the antheræ are ſimple: the germen is roundiſh and acuminated; the ſtyle is cylindric, and of the length of the flower; the ſtigma is obtuſely capitated: the fruit is an oval, pentagonal, obtuſe capſule, formed of five valves: the ſeeds are numerous and paleaceous. Such is the ſtate of the terminatory flower, but the lateral ones, if there be any, have a fifth leſs of all the parts.

This genus comprehends the Orobanchoides of Tourneſort, and the Hypopitys of Dillenius.

1. *Monotropa floribus lateralibus octandris, terminatrici decandra.*
The Monotropa, with the lateral flowers, with eight ſtamina, the terminatory one ten.

The root is extreamly long, and moderately thick; the ſtalk is as thick as a man's finger, when in it's full vigour; it is yellow, contorted, and, as it were, like a rope; there are no leaves on it, but only ſome ſquammoſe remains; at the top ſtand ſeveral flowers, ſmall, and of a whitiſh yellow; when the plant begins to flower, it is of a pale

pale yellow, afterwards it becomes blackiſh; it's utmoſt height is not more than ten inches; it's ſmell very remarkable, like that of primroſe roots, eſpecially when it is paſt flowering.

It is a native of England, but is ſcarce; I have only met with it in the Weſt riding of Charlton-foreſt, Suſſex. Plot calls it, Hypopitys lutea verbaſculi odore; others ſimply, Hypopitys.

2. *Monotropa caule unifloro decandro.*

The Monotropa, with one flower on the ſtalk, with ten ſtamina.

The root is oblong and thick; the ſtalk ſlender, ſucculent, and brown; the height of the whole plant ſix inches; the flower is larger than in the other ſpecies, and of a browniſh yellow.

It is a native of Virginia, and ſome other parts of North America.

ZYGOPHYLLUM.

THE calyx is a perianthium, compoſed of five oval, obtuſe, erect, hollow leaves: the corolla is compoſed of five petals, broadeſt at the top, obtuſe, emarginated, and larger than the cup: the nectarium conſiſts of ten convergent leaves, and includes the germen: the ſtamina are ten ſubulated filaments, ſhorter than the corolla; the antheræ are oblong and incumbent: the germen is oblong, and attenuated at the baſe: the ſtyle is ſubulated, and of the length of the ſtamina; the ſtigma is ſimple: the fruit is an oval, pentagonal capſule, formed of five valves, containing five cells, with ſepta adhering to the valves: the ſeeds are numerous, roundiſh, and compreſſed: the figure of the fruit is ſubject to variation; and there is a ſpecies, in which the parts of fructification are a fifth leſs.

This genus comprehends the Fabago of Tournefort.

Zygophyllum capſulis priſmatico-pentaedris. Bean Capers.

The Zygophyllum, with priſmatic, pentaedral capſules.

The root is long, thick, perennial, and white; the ſtalks are numerous, firm, round, ſmooth, green, jointed, and ſucculent. At every joint ſtand two pedicles, thick, an inch long, and membranated: the leaves are roundiſh, ſucculent, of a bluiſh-green, and grow too from the ſame baſe; they are two inches and a half long, and two inches broad: the flowers ſtand on ſhort pedicles, which riſe in pairs from the alæ of the leaves; they are moderately large and white.

It is a native of Syria; but we have it in our gardens. Dodonæus calls it, Capparis Fabago; C. Bauhine, Capparis portulacæ folio.

ADENANTHERA.

THE calyx is an extreamly ſmall perianthium, compoſed of a ſingle leaf, divided into five ſegments at the top; the corolla is of a campanulated form, and conſiſts of five petals, ſeſſile, lanceolated, convex inwardly, and concave below: the ſtamina are ten, erect, ſubulated filaments, ſomewhat ſhorter than the corolla: the antheræ are roundiſh, incumbent, and have at their exterior extremity a globoſe glandule: the germen is oblong, and gibbous in it's lower part; the ſtyle is ſubulated, and of the length of the ſtamina: the ſtigma is ſimple; the fruit is a long compreſſed legumen: the ſeeds are numerous and roundiſh.

It is an oriental, deſcribed in the Hort. Mal. 6. 14.

HÆMATOXYLON.

THE calyx is a perianthium, compoſed of a ſingle leaf, divided into five oval, permanent ſegments: the corolla conſiſts of five oval, equal petals, ſomewhat larger than the cup: the ſtamina are ten ſubulated filaments, ſomewhat longer than the

corolla; the antheræ are ſmall: the germen is of an ovato-oblong figure; the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is thick and emarginated: the fruit is a capſule of a lanceolate, obtuſe figure, compoſed of two navicular valves, and containing one cell: the ſeeds are oblong and compreſſed.

MELIA.

THE calyx is a very ſmall perianthium, compoſed of a ſingle leaf, divided into five ſegments, erect and obtuſe: the corolla conſiſts of five long, patent petals, of a lineari-lanceolate figure: the nectarium is cylindric, formed of a ſingle leaf, of the length of the corolla, and divided lightly into ten ſegments: the ſtamina are ten very ſhort filaments, inſerted into the top of the nectarium; the antheræ do not riſe above it: the germen is conic; the ſtyle is cylindric, and of the length of the nectarium; the ſtigma is obtuſe and emarginated: the fruit is a ſoft, globoſe drupe; the ſeed is a nut, of a roundiſh figure, marked with five furrows, and contains five cells, with a ſingle, oblong kernel in each.

This genus comprehends the Azederach of Tournefort and others.

1. *Melia foliis pinnatis.* The Bead-tree.
The pinnated-leaved Melia.

The root is brachiated; the trunk two feet thick; the bark rough and ſcabrous; the tree grows to thirty or forty feet high, and is very ramoſe and ſpreading: the leaves are pinnated and very large, a foot and half in length, and compoſed of a great many pairs of pinnæ, with an odd leaf at the end. The flowers ſtand on long pedicles, in conſiderable cluſters; they are ſmall, of a very ſweet ſmell, and of a bluiſh or purpliſh colour. The fruit is large, and, when ripe, of a fine yellow colour.

It is a native of Syria; we have it in many gardens. C. Bauhine calls it, Azederach arbor folio fraxini, flore cæruleo. There is only one known ſpecies of this genus beſide this, which is the ramoſe-leaved, ever-green, pale-flowered Melia, or Indian Azederach.

RUTA.

THE calyx is a ſhort, permanent perianthium, divided into four parts: the corolla conſiſts of four oval, hollow, patent petals, with very narrow ungues: the ſtamina are eight ſubulated, patent filaments, of the length of the corolla: the antheræ are erect and ſhort; the germen is gibbous, and marked with a cruciform figure, and with eight points at the baſe: the ſtyle is erect and ſubulated; the ſtigma is ſimple: the fruit is a gibbous capſule, compoſed of four lobes, and, in ſome meaſure, divided from the top into four parts; it contains four cells, and opens four ways at the top: the ſeeds are numerous, ſcabrous, of a kidney-like ſhape, and angular. Theſe are the characters of the lateral flowers: the top flower, in ſome ſpecies, has an addition of a fourth part in all the fructifications.

This genus comprehends the Ruta of authors in general, and the Pſeudoruta of Micheli: in the Pſeudoruta the petals are plane and entire, and the number of all the parts of fructification quinary.

1. *Ruta foliis decompoſitis, ſegmentis latiuſculis.* Common Rue.
The Ruta, with decompound leaves, with broad ſegments.

The root is divaricated, woody, yellow, and fibrated: the ſtalks are woody, round, covered with a whitiſh bark, and grow to two or three feet high; the young ſhoots are green; the leaves are formed of a multitude of roundiſh ſegments, placed on ramoſe pedicles: the flowers ſtand in cluſters at the tops of the ſtalks, and are beautiful and yellow.

It is a native of France, Italy, and Africa; it is every-where in our gardens. C. Bauhine calls it, Ruta hortenſis latifolia.

2. *Ruta foliis decompoſitis anguſtioribus, petalis villoſis.*
The decompound, narrow-leaved Ruta, with hairy petals.

The root is yellow, woody, long, and divaricated; the trunk an inch in diameter; the leaves very large, but narrow and oblong, and the ſegments they are compoſed of are alſo narrow: the flowers are large, hairy, and of a beautiful bright yellow.

It is a native of Africa, and of ſome parts of Europe. Moriſon calls it, Ruta chalepenſis anguſtifolia florum petalis villis ſcatentibus.

The other ſpecies are, 1. The great, ſtinking, wild Rue. 2. The dwarf Rue, with large and few ſegments in the leaves. 3. The broad-leaved, hairy-flowered Rue. 4. The white-flowered, prickly Rue. 5. The flax-leaved Rue. 6. The ternate, narrow-leaved, large-flowered Rue, called, Pſeudoruta, by Micheli.

FRAGONIA.

THE calyx is a very ſmall, deciduous perianthium, compoſed of five lanceolate, erect, patulous leaves: the corolla conſiſts of five patent petals, of a cordated form; their ungues long, ſlender, and inſerted into the calyx; the ſtamina are ten, erect, ſubulated filaments, longer than the calyx: the antheræ are roundiſh; the germen is pentangular; the ſtyle is ſubulated; the ſtigma is ſimple: the fruit is a capſule of a rotundo-acuminated figure; the valves that compoſe it are ten, which form five lobes, and as many compreſſed cells; the ſeeds are ſingle and roundiſh.

Fragonia foliolis lanceolatis planis lævibus. **Prickly Cretic Trefoil.**
The plane, ſmooth, lanceolated Fragonia.

The root is ſmall, oblong, and divaricated; the ſtalk is ſtriated, procumbent, and very ramoſe: the leaves ſtand three on each pedicle, and two of theſe pedicles grow together at every divarication of the ſtalk: each leaf is oblong, ſmooth, ſmall, and terminates in a ſpine; and at the baſes of the pedicles ſtand other more rigid ſpines bending downwards: the flowers ſtand ſingly on ſhort pedicles, ariſing from the divarications of the branches; they are very large, and of a beautiful purple.

It is a native of Italy and France. C. Bauhine calls it, Trifolium ſpinoſum Creticum, a name moſt others have borrowed.

TRIBULUS.

THE calyx is a perianthium, divided into five parts, and a little ſhorter than the corolla: the corolla conſiſts of five oblong, obtuſe, patent petals: the ſtamina are ten very ſmall, ſubulated filaments; the antheræ are ſimple; the germen is oblong, and of the length of the ſtamina; there is no ſtyle: the ſtigma is capitated: the fruit is of a roundiſh figure, and aculeated; it is compoſed of five capſules, gibbous on one ſide, and armed with three or four points on the other, angulated and convergent: the ſeeds are numerous, turbinated, and oblong.

Tribulus foliolis ſexparium ſubæqualibus. **Land Caltrops.**
The Tribulus, with ſix pairs of nearly equal pinnæ.

The root is very long, ſlender, white, ſimple, and fibrated; the ſtalks are numerous, round, ſtriated, hairy, geniculated and procumbent, uſually of a reddiſh colour, ſix or eight inches long, and ramoſe: the leaves ſtand alternately, except at the top of the ſtalks, where they are uſually oppoſite; they are compoſed of about ſix pairs of oblong pinnæ, arranged on a middle rib, and are ſomewhat hairy: the flowers ſtand ſingly on long pedicles, ariſing from the alæ of the leaves; they are large and yellow.

It is a native of France and Italy. Dodonæus calls it, Tribulus terreſtris; C. Bauhine, Tribulus terreſtris ciceris folio, fructu aculeato.

JUSSIÆA.

THE calyx is a ſmall, permanent perianthium, placed on the germen, and compoſed of five ovato-acute ſegments: the corolla conſiſts of four or five roundiſh patent petals; the ſtamina are eight or ten filaments, very ſhort and filiform: the antheræ are roundiſh; the germen is oblong; the ſtyle is filiform; the ſtigma is capitated, plane, and marked with five ſtriæ: the fruit is oblong, thick, coronated, and opens longitudinally: the ſeeds are numerous, and diſpoſed in ſeries.

Juſſiæa, erecta floribus tetrapetalis octandris ſeſſilibus.
The erect Juſſiæa, with four-leaved, octandrous, ſeſſile flowers. — **Catalonian Jaſmine.**

The root is oblong, thick, white, divaricated, and fibrated: the ſtalk is round, erect, thick, and robuſt, and of the height of a man: the leaves ſtand alternately; they are ſmooth, undivided, viſcous, oblong, and lanceolated: the flowers are large and yellow; they ſtand ſingly at the alæ of the leaves, and divarications of the ſtalks.

It is a native of America. Seba calls it, Jaſminum Catalonicum; Plukenet, Lyſimachia foliis parietariæ.

FRANKENIA.

THE calyx is an oblong, tubulated perianthium, formed of a ſingle leaf, permanent, and divided into five ſhort ſegments at the extremity: the corolla conſiſts of five petals, with narrow ungues, of the length of the cup: the limb is plane; the bracteæ round, plane, and patent: the ſtamina are ten filaments, longer than the tube; the antheræ are ſimple; the germen is roundiſh; the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is divided into three parts: the fruit is an oval capſule, covered by the cup. It is formed of three valves, and contains a ſingle cell; the ſeeds are numerous, oval, and minute.

1. *Frankenia floribus axillaribus ſolitariis.*
The axillary, ſolitary-flowered Frankenia. — **Procumbent Sea Heath.**

The root is ſmall, oblong, tough, and white; the ſtalk is rigid, uneven, procumbent, and very ramoſe; it grows to eight inches long: the leaves are very ſmall, oblong, and of a ſomewhat lanceolated figure; they ſtand four at a joint, ſurrounding the ſtalk, and have no pedicles: the flowers are large, and of a beautiful purple; they ſtand ſingly in the axillæ of the branches.

It is found on our ſea-coaſts. Ray calls it, Erica ſupina maritima Anglica; C. Bauhine, Polygonum marinum minus folio ſerpylli.

2. *Frankenia floribus terminatricibus confertis.*
The Frankenia, with cluſtered, terminatory flowers. — **Thyme-leaved Sea Chickweed.**

The root is long, woody, and white; the ſtalks are robuſt, ſquare, hairy, and ſix or eight inches long, partly procumbent, partly erect: the leaves ſtand ſix or eight at a joint, without pedicles; they are ſhort, and of a lanceolated figure: the flowers are large and white; they ſtand in cluſters ten, or more, together, on the tops of the branches.

It is found on the ſhores of the Mediterranean. Tournefort calls it, Alſine Cretica maritima ſupina caule hirſuto.

The other ſpecies are, 1. The ſmooth, broader, glaucous-leaved, white-flowered Frankenia. 2. The broader-leaved, hairy, quadrifoliate, ſmaller-flowered Frankenia. 3. The narrow-leaved, pale-flowered Frankenia.

CLETHRA.

THE calyx is a permanent perianthium, compoſed of five leaves, of an oval figure, hollow and erect: the corolla conſiſts of five oblong, erecto-patent petals, twice the length of the cup, and broadeſt toward their extremities: the ſtamina are ten ſubulated filaments, of the length of the corolla: the antheræ are oblong, erect, and ſplit at the top: the germen is roundiſh; the ſtyle is filiform, erect, permanent, and increaſing: the ſtigma is divided into three parts: the fruit is a roundiſh capſule, incloſed in a cup; it is formed of three valves, and contains three cells: the ſeeds are numerous and angular.

It is an American, mentioned by Gronovius, in his Fl. Virg. 47.

PYROLA.

THE calyx is a very ſmall, permanent perianthium, divided into five ſegments: the corolla conſiſts of five roundiſh, hollow, patent petals: the ſtamina are ten ſubulated filaments, ſhorter than the corolla: the antheræ are large, nutant, and bicornate at top: the germen is roundiſh, but angulated: the ſtyle is filiform, permanent, and longer than the ſtamina: the ſtigma is thick: the fruit is a roundiſh, depreſſed, pentagonal capſule, containing five cells, and opening at the angles: the ſeeds are numerous and paleaceous: the ſtamina and ſtyle are in ſome erect, in others declinated ſideways: the figure of the ſtigma alſo varies.

1. *Pyrola ſtaminibus adſcendentibus, piſtillo declinato.*
The Pyrola, with aſcendent ſtamina, and a declinate piſtil.

Engliſh Winter-green.

The root is fibrous and white: the radical leaves are ſix or eight in number; they are of a roundiſh figure, and deep green colour, and about an inch long, thick, ſmooth, gloſſy, and placed on pedicles of three inches long. The ſtalk is ſingle, ſimple, erect, and ſeven or eight inches high; it has a few ſmall, acute leaves on it, and, at the top, ſtands a kind of ſhort ſpike of flowers; they are large, white, and very beautiful.

It is a native of the north of England. C. Bauhine calls it, Pyrola rotundifolia major; others, Pyrola vulgaris.

2. *Pyrola racemis unilateralibus.*
The Pyrola, with flowers only on one ſide.

Tenderer Winter-green.

This is a much more delicate, and leſs robuſt, plant than the former. The root is ſmall and creeping. The radical leaves are an inch long, three quarters of an inch broad, thin, ſoft to the touch, and ſerrated. The ſtalk is five or ſix inches high, very ſlender, and uſually bending. The flowers are ſmaller than thoſe of the former; they are of a beautiful milk-white colour, and ſtand in a kind of cluſter, on one ſide only of the ſtalk. The antheræ are longer than the corolla, and the ſtigma is prominent beyond them.

It is a native of moſt parts of Europe, in woods. C. Bauhine calls it, Pyrola folio mucronato ſerrato; Cluſius, Pyrola tenerior.

The other ſpecies are, 1. The umbellated, arbutus-flowered Pyrola. 2. The round-leaved Pyrola, with a ſingle flower. 3. The roundiſh, but ſerrated-leaved, Pyrola. 4. The ſhrubby, long-leaved Pyrola.

ANDROMEDA.

THE calyx is a very ſmall, permanent, coloured perianthium, divided into five ſegments: the corolla is of an inflated, oval, or campanulated figure, formed of a ſingle petal, and divided into five reflex ſegments at the extremity: the ſtamina are ten ſubulated filaments, ſhorter than the corolla, and ſcarce affixed to it: the antheræ are bicornate and nutant: the germen is roundiſh; the ſtyle is cylindric, longer than the ſtamina, and permanent; the ſtigma is obtuſe: the fruit is a roundiſh, pentagonal

capſule, compoſed of five valves, containing five cells, and opening in the angles: the ſeeds are numerous, ſmooth, and roundiſh.

This genus comprehends the Ledum of Micheli, the Chamædaphne of Buxbaum, the Polifolia of the ſame author, and the Chamærhododendros of Tournefort. The figure of the corolla varies, but the number of the ſtamina diſtinguiſhes this genus from the erica.

1. *Andromeda foliis alternis lanceolatis margine reflexis.* **Wild Roſemary.**
The alternate, lanceolate, and reflex-edged leaved Andromeda.

The root is woody, creeping, and fibrated. The ſtem is woody, low, and ramoſe. The leaves ſtand alternately; they are oblong, narrow, lanceolated, and have their edges reflex. The flowers are ſmall and reddiſh.

It is found on boggy grounds in the North of England. Ray calls it, Ledum paluſtre noſtras arbuti flore; C. Bauhine, Viti Ideæ adfinis polifolia montana.

2. *Andromeda foliis linearibus obtuſis ſparſis.*
The Andromeda, with linear, obtuſe, ſcattered leaves.

The root is woody, fibrated, and perennial. The ſtalks are in great part procumbent; they grow to eight or ten inches long, and are brown, ſcabrous, and ramoſe. The branches are often erect. The leaves are ſhort, linear, and obtuſe; they ſtand very cloſe and thick. The flowers ſtand on ſingle pedicles, of an inch long; they are large, of a deep blue colour, and narrow at the mouth.

It is common in the northern parts of Europe, on bogs on the mountains. Rudbeck calls it, Erica flore purpuraſcente pendulo, petiolo longo rubro, piceæ folio; Martin, Erica rarior.

The other ſpecies are, 1. The very narrow cluſtered-leaved Andromeda. 2. The obtuſe, imbricated-leaved Andromeda. 3. The blackiſh-leaved Andromeda. 4. The hairy Andromeda. 5. The ſerpyllum-leaved Andromeda.

ARBUTUS.

THE calyx is a ſmall, permanent, obtuſe perianthium, divided into five parts, and placed under the germen: the corolla conſiſts of a ſingle petal; it is of an oval figure, plane at the baſe, hollow, and divided at the mouth into five ſmall, obtuſe, revolute ſegments: the ſtamina are ten filaments, of a ſubulato-ventricoſe figure, very ſlender at the baſe, and affixed to the edge of the baſe of the corolla; they are of half the length of the corolla: the antheræ are bifid, and nutant: the germen is of a globoſe figure, and ſtands on a receptacle, marked with ten dots: the ſtyle is cylindric, and of the length of the corolla: the ſtigma is thick and acute: the fruit is a roundiſh berry, with five cells: the ſeeds are ſmall and oſſeous.

This genus comprehends the Arbutus and the Uva urſi of Tournefort, &c. it is nearly allied to the Vaccinium.

1. *Arbutus caulibus procumbentibus, foliis integerrimis.*
The procumbent-ſtalked and undivided-leaved Arbutus.

The root is woody, brown, and perennial. The ſtalks are numerous, diffuſe, and procumbent; they are from a foot to three or four in length, rounded, ſomewhat unequal, perennial, ramoſe, and uſually reddiſh. The leaves are of a vertically-oval figure; they ſtand in pairs, and are ſmooth, perennial, and have their edges turned in. The flowers ſtand in cluſters on the tops of the branches, eight or ten together; the top of the cluſter bends, and every flower has it's own pedicle, and a little ſquamma at it's baſe: the calyx is purple, and very ſmall; the flower moderately large, oval, and white.

This is a native of the northern parts of Europe, almoſt univerſally. Tournefort, Lobel, &c. call it Uva urſi; C. Bauhine, Vitis Idæa foliis carnoſis et veluti punctatis; others, Myrtillus ruber minor.

The other ſpecies are, 1. The black-fruited Arbutus, or Vitis Idæa, called the Black Whortle. 2. The broader-leaved Arbutus; and, 3. The arboreſcent, long-leaved Arbutus, or Strawberry-tree.

LEDUM.

THE calyx is a very ſmall perianthium, formed of one leaf, divided into five ſegments at the edge: the corolla conſiſts of five oval, hollow, patent petals: the ſtamina are ten patent, filiform filaments, of the length of the corolla: the antheræ are oblong; the germen is roundiſh; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is obtuſe: the fruit is a roundiſh capſule, containing five cells, and opening in five places at the baſe: the ſeeds are numerous, oblong, narrow, pointed at each end, and very ſlender.

Of this genus there is only one known ſpecies.

LEDUM. Marſh Ciſtus.

The root is creeping, tough, and woody. The ſtalks are numerous, woody, and firm; they grow to three feet high; they are very ramoſe, and their bark greyiſh. The leaves ſtand very thick; they are three quarters of an inch long, very narrow, and of a browniſh-green colour. The flowers are moderately large, and ſtand on the tops of the branches. The whole plant has a very ſtrong ſmell, and is glutinous to the touch.

It is frequent in Germany and Sweden. Ruppius calls it, Ledum rorismarini folio; C. Bauhine, Ciſtus ledon foliis roriſmarini, ferrugineis.

MELASTOMA.

THE calyx is a permanent perianthium, formed of a ſingle leaf, ventricoſe, and ſcarce at all divided at the extremity: the corolla conſiſts of five roundiſh petals, inſerted into the margin of the cup: the ſtamina are ten ſhort filaments, inſerted into the cup: the antheræ are long, ſomewhat crooked, and erect: the germen is roundiſh, and ſtands under the cup; the ſtyle is emarginated and crooked: the fruit is a roundiſh berry, included in the cup, and contains five cells; it is coronated with a cylindric margin: the ſeeds are numerous.

This genus comprehends the Melaſtoma of Burman, and the Acinodendron of the ſame author.

BARTRAMIA.

THE calyx is a perianthium, divided into five ſegments: the corolla conſiſts of five cuneiform petals: the ſtamina are eight oblong filaments: the ſtyle is capillary: the fruit is of a globoſe figure, and has hooked ſpines all over it.

Theſe characters ſufficiently diſtinguiſh the Bartramia, without a farther deſcription.

SCHINUS.

THE calyx is a very ſmall perianthium, divided into five parts at the edge: the corolla conſiſts of five patent petals: the ſtamina are ten; the ſtyle oblong; the germen roundiſh: the fruit is a globoſe berry; the ſeed is ſingle, globoſe, and large.

This genus comprehends the Molle of Tournefort and others; there is only one known ſpecies of it.

SCHINUS.

The root is brachiated, and very large; the tree tall and ſpreading. The leaves are pinnated; the rib is compreſſed, and there ſtand on it four or five pairs of pinnæ, oblong, narrow, and very lightly ſerrated about the edges, principally toward the extremities. The flowers ſtand in large cluſters, on peculiar pedicles; they are very ſmall, and of a yellowiſh-green colour. The berries are red, when ripe, and much reſemble thoſe of the aſparagus. The leaves of the young ſhoots are often laciniated; when rubbed, they have a ſtrong ſmell of fennel.

It is a native of Peru. C. Bauhine calls it, Lentiſcus Peruviana; J. Bauhine and others, Molle.

Claſs the Tenth. Order the Second.

DECANDRIA DIGYNIA.

Plants which have in every flower ten ſtamina and two ſtyles.

DIANTHUS.

THE calyx is a long, cylindric, ſtriated, permanent perianthium; it's mouth is erect, and divided into five ſegments; it's baſe is ſurrounded with four ſquammulæ, two of which ſtand lower than the reſt: the corolla conſiſts of five petals, the ungues of which are of the length of the cup; they are narrow, and inſerted into the receptacle: the limb is plane, and the bracteæ of the petals broadeſt at the extremity, and ſerrated: the ſtamina are ten ſubulated filaments, of the length of the cup, patulous at their tops: the antheræ are of an oval, oblong figure, compreſſed, and incumbent: the germen is oval; the ſtyles are two, ſubulated, and longer than the ſtamina: the ſtigmata are bent back and acuminated: the fruit is a cylindric, covered capſule, conſiſting of one cell, and opening four ways at the top: the ſeeds are numerous, compreſſed, and roundiſh; the receptacle is free, quadragonal, and but of half the length of the fruit.

This genus comprehends the Caryophyllus of Tournefort, &c. and the Tunica of Dillenius. The ſtyles in ſome ſpecies are but little longer than the ſtamina; in others they exceed them greatly, but they are, in this caſe, always revolute a great way.

1. *Dianthus caulibus uniflоris, ſquammis calycinis ovatis, corollis multifidis.* Maiden Pink.

The ſingle-flowered Dianthus, with the ſquammæ of the cup oval, and the corollæ multifid.

The root is ſlender, white, and fibrated. The ſtalks are round, green, ſlender, and procumbent. The leaves ſtand very cloſe, in pairs, on theſe, and are oblong and narrow; from the procumbent ſtalks riſe others, erect, ſlender, and four or five inches high; on theſe ſtand one or two pairs of oblong, narrow leaves, ſurrounding the ſtalk at their baſe, and, at the top of each ſtalk, ſtands a ſingle, large, and beautiful flower, of a pale red colour; ſometimes there are two, or more, flowers on the ſtalk, but a ſingle one is moſt uſual.

It is found in barren places with us. Ray calls it, Caryophyllus minor repens noſtras; C. Bauhine, Carophyllus humilis flore unico. Authors have made ſeveral other imaginary ſpecies from the different accidents of this.

2. *Dianthus floribus ſolitariis, ſquammis calycinis ſubovatis, corollis crenatis.* Clove July-flower.

The ſingle-flowered Dianthus, with the ſquammæ of the cup ſuboval, and the corollæ crenated.

The root is ſmall, white, and fibrated. The ſtalk is erect, round, jointed, and a foot and a half high. The leaves ſtand in pairs, and are long, narrow, pungent at the ends, and of a bluiſh-green colour. The top of the ſtalk divides into ſeveral branches, and on the extremities of theſe ſtand the flowers, which are large, and of a fine ſmell; their colour varies to infinity, but the variations all conſiſt of red and white, in different mixtures and proportions; a deep purpliſh red is the moſt common.

It is one of the great ornaments of our gardens. The carnations are all varieties of this ſpecies, owing principally to culture. The flowers are uſed as a cordial.

The other ſpecies are, 1. The common, wild Pink. 2. The ſingle-flowered, procumbent, Chineſe Dianthus. 3. The laciniated-flowered Dianthus. 4. The common, broad-leaved, wild Dianthus. 5. The barbated, broad-leaved Dianthus, called Sweet-

Sweetwilliams. 6. The proliferous Dianthus. 7. The narrow-leaved, barbated Dianthus, or Deptford Pink. Tournefort has made about a hundred ſpecies, from the varieties of one or other of theſe.

SAPONARIA.

THE calyx is a permanent perianthium, formed of a ſingle leaf, oblong, and divided into five ſegments at the edge: the corolla conſiſts of five petals: the ungues are narrow, angulated, and of the length of the cup: the limb is plane; the bracteæ broadeſt toward the extremity, and obtuſe: the ſtamina are ten ſubulated filaments, of the length of the tube of the corolla, alternate, inſerted into the ungues of the petals: the antheræ are oblong and incumbent: the germen is cylindric; the ſtyles are two, ſtrait, parallel, and of the length of the ſtamina; the ſtigmata are acute: the fruit is a covered capſule, nearly of the length of the cup; there is only one cell in it, and it's figure is cylindric: the ſeeds are numerous and ſmall; the receptacle is free: the germen and capſule are, in ſome ſpecies, more ſhort and rounded, and the ſegments of the cup are deeper in ſome than in others; in ſome they are almoſt five-leaved.

1. *Saponaria calycibus monophyllis cylindraceis, foliis ovato-lanceolatis.* **Common Soapwort.**

The ovato-lanceolate leaved Saponaria, with cylindric, monophyllous cups.

The root is ſlender, jointed, creeping, and reddiſh on the ſurface. The ſtalks are two or three feet high, ſmooth, round, jointed, and, though thick, not very ſtrong. The leaves ſtand in pairs; they are two inches and a half long, and an inch and a half broad, ſmooth, and marked with three large, longitudinal ribs. The flowers ſtand in a kind of umbels at the tops of the ſtalks; they are of a pale fleſh colour, or elſe white, and the petals not bifid,

It is common in many parts of England. C. Bauhine calls it, Saponaria major lævis; others, Saponaria vulgaris.

2. *Saponaria calycibus pentaphyllis, corymbis faſtigiatis, foliis linearibus, caule adſcendente.*

The linear-leaved, aſcendent-ſtalked Saponaria, with pentaphyllous cups.

The root is oblong, ſlender, white, and fibrated. The ſtalks are numerous, jointed, often reddiſh, and oblique; they grow to four, five, or more, inches in length. The leaves are long, and very narrow: the flowers ſtand in a kind of umbel at the top, and are uſually white.

It is a native of Germany and Sweden. Dillenius makes it a kind of Spergula. C. Bauhine calls it, Caryophyllus ſaxatilis floribus gramineis umbellatis corymbis.

3. *Saponaria calycibus pentaphyllis corollis, crenato-emarginatis, foliis ſubulatis.*

The Saponaria, with five-leaved cups, crenato-emarginated corollæ, and ſubulated leaves.

The root is ſlender, oblong, white, and woody. The ſtalks are round, ſlender, green, and grow to four inches. The leaves are extremely narrow, oblong, and ſubulated; they ſtand two at every joint. The flowers ſtand only toward the tops of the ſtalks, and are of a pale red colour, ſtreaked with purple.

It is a native of moſt parts of Europe. C. Bauhine calls it, Caryophyllus minimus muralis; Dillenius, Spergula foliis knawel flore purpuraſcente; others make it a Lychnis.

The other ſpecies are, 1. The hairy, cupped, diffuſe-ſtalked Saponaria, called the little-flowered, oriental Lychnis. 2. The common, perfoliate, red-flowered Saponaria, called red corn Lychnis. 3. The graſſy-leaved, ſaxifrage Saponaria. 4. The heath-

leaved, umbellated-flowered Saponaria. 5. The broader-leaved Saponaria; and, 6. The oblong-leaved Saponaria.

SCLERANTHUS.

THE calyx is a tubulated, permanent perianthium, formed of one leaf, and divided into five ſegments: there is no corolla: the ſtamina are ten very ſmall, erect, ſubulated filaments, inſerted into the calyx: the antheræ are roundiſh; the germen is roundiſh; the ſtyles are two, erect and capillary, and of the length of the ſtamina; the ſtigmata are ſimple: the fruit is an oval capſule, contained in the baſe of the cup, which is ſhut up at the neck: the ſeeds are two, convex on one ſide, and plane on the other.

This genus contains the Knawel of Dillenius; Vaillant confounds it with the Alchimilla.

1. *Scleranthus calycibus fructus clauſis.* **Hoary, perennial Knawel.**

The Scleranthus, with the calyces of the fruit ſhut.

The root is oblong and tough. The ſtalks are numerous and procumbent, round, ſlender, jointed, and, toward the tops, ramoſe. The whole plant is of a greyiſh colour, and appears hoary. The leaves ſtand in pairs; they are oblong, narrow, pointed at the ends, and embrace the ſtalk at their baſe: the flowers are very numerous; they ſtand in little cluſters, at the extremities of the ramifications, and are large and white.

It is common on ſandy grounds, and is the plant at the roots of which the Coccus Polonicus is found in Poland; I have alſo met with the ſame inſect here at it's roots. C. Bauhine calls it, Polygonum cocciferum; Ray, Knawel incanum flore majore perenne. The inſect, or coccus, at it's root, affords a very valuable ſcarlet dye.

2. *Scleranthus calycibus fructus patulis.*

The Scleranthus, with the cups of the fruit patulous.

The root is oblong, ſlender, and woody. The ſtalks are round, jointed, ſlender, and procumbent. The leaves ſtand in pairs; they are broadeſt at the baſe, and terminate in a point; they are hollowed, and of a pale green colour. The flowers ſtand in the divarications of the ſtalks, and, at their extremities, they are ſmall, and of a greeniſh-white colour.

It is common in ſandy places. C. Bauhine calls it, Polygonum montanum vermiculatæ foliis; Dalechamp, Polycarpum.

MITELLA.

THE calyx is a perianthium, of a campanulated figure, formed of one leaf, and lightly divided at the edge into five ſegments: the corolla conſiſts of five patent petals, of an oblong figure, longer than the ſegments of the cup, and with their ungues narrow, and inſerted into the calyx: the ſtamina are ten filaments, inſerted alſo into the calyx, and broadeſt at the top: the antheræ are roundiſh and erect: the germina are two, of an ovato-acuminate figure, parallel, but convergent, and opening inwards: the ſtyles are unequal; the ſtigmata are ſimple: the fruit is a capſule, of a globoſe figure, but with a point, formed of two valves, and opening between them, containing only one cell: the ſeeds are numerous, and of a roundiſh oblong figure. The petals in ſome are entire, in others multifid.

1. *Mitella petalis multifidis.*

The Mitella, with multifid petals.

The root is fibrous; the radical leaves are very large, often of the bigneſs of the palm of a man's hand; they are broad, roundiſh, of a dark green, and hairy on both ſurfaces; they ſtand on pedicles three or four inches long: the ſtalks are a foot, or more, high, ſlender, hairy, round, and naked to the middle, where they have two leaves, ſmaller, more angulated, and crenated than the radical ones, and placed oppoſite. The upper

upper half of the ſtalk forms a kind of ſpike of flowers; they are ſmall, and of a red colour in various degrees, from deep purple to whitiſh, and ſtand on long pedicles.

It is a native of America. Tournefort calls it, Mitella Americana florum petalis fimbriatis.

2. *Mitella petalis integris.*

The Mitella, with undivided petals.

The roots are fibrous and white; the ſtalks are ſlender, hairy, and procumbent: the leaves are large, of a roundiſh figure, and duſky-green colour, hairy and crenated round the edges: the flowers ſtand in a kind of ſpikes on ſtalks, of four or five inches long, very ſlender and erect; they are ſmall, and of a pale red.

It is a native of America, and of ſome parts of Europe. Tournefort calls it, Mitella Americana florum petalis integris; Bodæus, Cortuſa Indica vel Hedera terreſtris Indica, a name ſince uſed by many others.

There is but one other known ſpecies of this genus; this is, The deep-purple, hairy-flowered Mitella. The Roucou, or Mitella Americana maxima tinctoria, is of a very different claſs. See BIXA.

SAXIFRAGA.

THE calyx is a ſhort, acute, permanent perianthium, formed of a ſingle leaf, divided into five ſegments: the corolla is larger than the calyx, and conſiſts of five plane petals, narrow at the baſe; the ſtamina are ten ſubulated filaments, alternately ſhorter; the antheræ are roundiſh: the germen is of a roundiſh, acuminated figure, and terminates in two ſhort ſtyles; the ſtigmata are obtuſe: the fruit is a biroſtrated capſule, of a figure approaching to oval; it contains two cells, and opens between the points; the ſeeds are numerous and ſmall.

This genus comprehends the Geum and the Saxifraga of Tournefort and others. In the Saxifrages the capſule and germen are ſurrounded with the receptacle of the corolla: in the Geum they ſtand upon it, and are not ſurrounded by it.

1. *Saxifraga foliis reniformibus lobatis, caule ramoſo, radice granuloſa.* White Saxifrage.

The granulous-rooted, ramoſe-ſtalked Saxifraga, with kidney-ſhaped, lobated leaves.

The root is compoſed of a number of thick, white fibres, to which are annexed a great many tuberous bodies, of the ſize of a ſmall pea, and of a purpliſh colour: the radical leaves are of a roundiſh but reniform ſhape, crenated round their edges ſo deeply, as to be in a manner divided into lobes; they are about three quarters of an inch in diameter, and ſtand on pedicles three inches long: the ſtalk is round, thick, ten inches high, and ramoſe; the leaves ſtand alternately, and are more angulated than the radical ones: the flowers are large, white, and beautiful.

It is common in our meadows. C. Bauhine calls it, Saxifraga rotundifolia alba; others ſimply, Saxifraga alba. The tuberoſities at the root are diuretic; they are kept in the ſhops, under the name of Saxifrage ſeeds.

2. *Saxifraga foliis cuneiformibus retuſis radicalibus ſinuato-ſerratis, caule paniculato.* London Pride, or None ſo pretty.

The paniculate-ſtalked, cuneiform, retuſe-leaved Saxifraga.

The root is a cluſter of fibres, white and moderately thick; the radical leaves are numerous, arranged in an orbicular form, and procumbent; they are of a figure approaching to round, an inch long, and ſerrated, and, as it were, prickly round the edges: the ſtalks are ſlender, round, hairy, and ramoſe; the flowers are ſmall and numerous; when nearly examined, they are extreamly beautiful; their ground colour is a pale whitiſh-red, but they are elegantly ſpotted with purple.

It

It is a native of the Pyrenæan mountains. Ray calls it, Geum foliis ſubrotundis, piſtillo floris rubro. It is frequent in our gardens, and has been found wild on ſome of the Welſh mountains.

The other ſpecies are, 1. The Saxifraga, with cartilaginous, edged, crenated leaves, called ſilver-edged Sedum. 2. The palmated-leaved, uniflorous Saxifraga. 3. The palmated and cordated-leaved Saxifraga. 4. The little ſpring Saxifraga, called rue whitlow graſs. 5. The ſuboval, crenated-leaved Saxifraga, with naked ſtalks, and capitated flowers. 6. The marſh Saxifraga, with oblong, crenated leaves. 7. The ſubulated-leaved Saxifraga, called pale-flowered, mountain Sedum. 8. The Saxifraga, with linear-ciliated leaves. 9. The purple, heath-like, mountain Saxifraga. 10. The moſſy, trifid-leaved Saxifraga. 11. The ſerrated, ſedum-leaved Saxifraga. 12. The roundiſh, ſerrated-leaved Saxifraga. 13. The longer-leaved Saxifraga. 14. The greater, tridactylate-leaved Saxifraga. 15. The little, round-leaved Saxifraga. 16. The oblong-leaved, ramoſe-ſtalked Saxifraga.

HYDRANGEA.

THE calyx is a ſmall, permanent perianthium, formed of one leaf, divided into five ſegments: the corolla conſiſts of five equal, roundiſh petals, larger than the ſegments of the cup: the ſtamina are ten filaments, alternately ſhorter, but all exceeding the corolla in length: the antheræ are roundiſh and didymous; the germen is roundiſh, and placed under the receptacle; the ſtyles are two, ſhort and diſtant; the ſtigmata are obtuſe and permanent: the fruit is a roundiſh, didymous capſule; the two permanent ſtyles make two beaks to it, and it is rendered angular by many ribs. It is coronated by the cup, and divided into two cells by a tranſverſe membrane: the ſeeds are numerous, angular, acuminated, and very ſmall.

It is a native of North America, deſcribed by Gronovius.

ROYENA.

THE calyx is a permanent, ventricoſe perianthium, formed of a ſingle leaf, and divided into five obtuſe ſegments: the corolla is formed of a ſingle petal; the tube is of the length of the calyx; the limb is patent, reflex, and divided into five oval ſegments: the ſtamina are ten very ſhort filaments, growing to the corolla; the antheræ are oblong, acute, didymous, erect, and of the length of the tube: the germen is oval and hairy; it terminates in two ſtyles, ſomewhat longer than the ſtamina; the ſtigmata are ſimple: the fruit is an oval capſule, formed of four valves, marked with four furrows, but containing only one cell: the ſeeds are four oblong, triangular nuts, included in a calyptra.

It is an American, deſcribed by Houſton, under the name of a ſpecies of Staphylodendron.

Claſs the Tenth. Order the Third.

DECANDRIA TRIGYNIA.

Plants which have in every flower ten ſtamina and three ſtyles.

MALPIGHIA.

THE calyx is a ſmall, hollow, permanent perianthium, divided into five parts; there is a callous, melliferous glandule placed under each of the retroflex ſinus's of this cup. The corolla conſiſts of five large, hollow, kidney-ſhaped petals, with long and linear ungues: the ſtamina are ten ſmall, erect, and ſomewhat broad filaments, placed ſo as to form a kind of cylinder: the antheræ are ſimple; the germen is roundiſh, and very ſmall; the ſtyles are three, erect and ſhort; the ſtigmata are obtuſe: the fruit is a large, globoſe berry, of an uneven ſurface, and containing only one cell: the ſeeds are three oſſeous, oblong, obtuſe, angulated, and contain each an oblong, obtuſe kernel.

It is an American, deſcribed by Plumier, 36.

BANIS-

BANISTERIA.

THE calyx is a very ſmall, permanent perianthium, with tubercles underneath it; there are two melliferous glandules under every ſegment of the cup, excepting only one: the ſegments are five, ſo that in all there are eight of theſe glandules: the corolla conſiſts of five large, patent, orbiculated petals, crenated, and with oblong, linear ungues: the ſtamina are ten very ſmall filaments; the antheræ are ſimple; the germina are three; they are alated and grow together; the ſtyles are three, and ſimple; the ſtigmata are obtuſe: the fruit conſiſts of three capſules, running into long alæ, containing each only one cell, with little appendages at the ſides, and not open: the ſeed is ſingle, covered and dentated at the lateral margin.

It is an American, deſcribed by Plumier, and by Houſton under the name of a ſpecies of Clematitis.

TRIOPTERIS.

THE calyx is a very ſmall, permanent perianthium, divided into five ſegments: the corolla conſiſts of ſix ſeeming petals, oval, erecto-patulous, equal, and permanent, ſurrounded by three others, ſmaller than themſelves, but equal to one another: the ſtamina ſtand out of the petals, and are inſerted into the receptacle; they are ten capillary filaments, the exterior ones ſhorter than the others: the antheræ are ſimple; the germen is trifid; the ſtyles are three, ſimple and erect; the ſtigmata are obtuſe; there is no pericarpium: the ſeeds are three, erect and carinated on the back; each of them has externally, at it's baſe, an ala, and at it's apex two: theſe alæ are what, in the flowering ſtate of the plant, appear to be petals, but they are not truly ſuch.

GARIDELLA.

THE calyx is a ſmall, oblong, erect, acuminated perianthium, compoſed of five leaves: the corolla has no petals; but there are five long, equal, bilabiated nectaria: the exterior lip ſtands loweſt, and is plane, and divided into two linear, oblong, obtuſe ſegments; the interior lip ſtands higher, and is ſhort and ſimple: the ſtamina are ten ſubulated filaments, ſhorter than the corolla; the antheræ are erect and obtuſe; the germina are three, oblong, compreſſed, erect, and acuminated; there are ſcarce any ſtyles: the ſtigmata are ſimple: the fruit conſiſts of three oblong, compreſſed, acuminated capſules, formed of two valves, with the interior future convex: the ſeeds are numerous and ſhort.

Of this genus there is only one ſpecies.

GARIDELLA. Fennel-leaved Nigella.

The root is oblong, thick, and tough, but annual: the ſtalks are numerous, ſtrait, ſlender, erect, and ramoſe; the leaves ſtand alternately, and there are but few of them; they are oblong, large, and divided into a multitude of fine ſlender ſegments: the flowers ſtand on the tops of the ramifications, and are large, and of a pale whitiſh colour.

It is a native of France. C. Bauhine calls it, Nigella Cretica folio fœniculi. It's ſeeds are of a fragrant ſmell.

CHERLERIA.

THE calyx is a perianthium, compoſed of five equal, lanceolated leaves: the corolla has properly no petals: the nectaria are five in number, roundiſh and emarginated, very ſmall, and placed in a circular direction: the ſtamina are ten ſubulated filaments, the alternate ones affixed to the nectarium: the antheræ are ſimple; the germen is oval; the ſtyles are three, and bent back; the ſtigmata are ſimple: the fruit is a capſule of an ovated figure, formed of three valves, and containing three cells: the ſeeds are numerous, convex on one ſide, and angulated on the other.

It is a native of Switzerland, deſcribed by Haller.

DRYPIS.

THE calyx is a permanent perianthium, formed of a ſingle leaf, inflated, and divided into five ſegments: the corolla conſiſts of five petals; their ungues are of the length of the cup, and narrow: the limb is plane; the bracteæ divided into two linear, obtuſe ſegments: the ſtamina are ten filaments, nearly of the length of the corolla; the antheræ are ſimple: the germen is globoſe; the ſtyles are three, ſimple and patulous; the ſtigmata are ſimple: the fruit is a ſmall, globoſe, covered capſule, with only one cell, in which is a ſingle kidney-ſhaped ſeed.

Of this genus there is only one known ſpecies.

DRYPIS.

The root is oblong, ſlender, white, tough, and fibrated: the ſtalk is angular, erect, jointed, and ramoſe: the leaves ſtand in pairs, and are oblong, narrow, deeply laciniated toward the baſe, and terminate in a long, narrow, prickly point; from the alæ of all the leaves riſe ſhort branches, the tops of which have two or three flowers arranged into a kind of umbel, and ſurrounded with ſpines; they are ſmall and white.

It is a native of Italy. Micheli, who has charactered it accurately, calls it, Drypis Italica aculeata floribus albis umbellatim compactis; Moriſon calls it, Carduus foliis tenuiſſimis ſpinoſis.

CUCUBALUS.

THE calyx is a permanent, inflated perianthium, of a globoſe figure, formed of a ſingle leaf, and divided into five parts at the end: the corolla conſiſts of five petals, the ungues of which are of the length of the cup; the limb is plane, and the bracteæ bifid: the ſtamina are ſubulated filaments, uſually five in number; the antheræ are oblong; the germen is roundiſh; the ſtyles ſometimes three, ſometimes five, of a ſubulated figure, and longer than the ſtamina; the ſtigmata are oblong, hoary, and reflex; the fruit is a ſmall, roundiſh, acuminated capſule; the ſeeds are numerous and roundiſh.

This genus comprehends the Cucubalus of Tournefort, and the Beben of Malpighi, and many of the Lychnis's of authors. The figure of the calyx is the great diſtinguiſhing character; all the reſt is uncertain.

1. *Cucubalus caule ramoſo, floribus trigynis, fructu colorato globoſo.*

The ramoſe-ſtalked Cucubalus, with coloured, globoſe fruit. **Berry-bearing Chickweed.**

The root is oblong, thick, and perennial; the ſtalks are numerous, round, procumbent, divaricated, and diffuſed: the leaves are placed two at every joint; they are moderately large, of an oval figure, but pointed at the end; the flowers are ſmall and white; the cup very much inflated, and the fruit a moderately large berry.

It is a native of Italy and Germany. C. Bauhine calls it, Alſine ſcandens baccifera; others, Cucubalus.

2. *Cucubalus calycibus fructus globoſis acuminatis, triginta ſtriis, foliis glabris.*

The ſmooth-leaved Cucubalus, with the ripe cup globoſe, and marked with thirty ſtriæ.

The root is oblong, thick, and fibrated; the ſtalks grow to two feet high, and are round, hairy, ramoſe, and ſtriated: the leaves are ſmooth, oblong, broad, and ſtand two at each joint: the flowers ſtand on moderately long pedicles at the tops of the branches, and in the divarications of the ſtalks; they are ſmall and purpliſh, and fade as ſoon as the

the ſun ſhines upon them: the cup, after the flower is fallen, ſwells out into a very large capſule, marked with not leſs than thirty high ſtriæ.

It is a native of Spain, where it is frequent in the corn-fields. C. Bauhine calls it, Lychnis latifolia calycibus turgidis ſtriatis.

3. *Cucubalus calycibus ſubovatis glabris reticulato-venoſis, capſulis trilocularibus.* White Ben.

The ſmooth, oval-cupped Cucubalus, with trilocular capſules.

The root is oblong, white, and woody; the ſtalk is round, jointed, ſmooth, ramoſe, and two feet high: the leaves are large, of an oval figure, ſmooth, though ſometimes accidentally hairy; they ſtand two at a joint, and are of a pale bluiſh-green colour: the flowers are moderately large and white; the cups inflated and ventricoſe; their ſurface is reticulated, and the longitudinal ſtriæ large.

It is common in our corn-fields. C. Bauhine calls it, Lychnis ſylveſtris quæ Ben album vulgo; others, Papaver ſpumeum. The Lychnis maritima repens of C. Bauhine and others is only a variety of this ſpecies.

The other ſpecies are, 1. The common wild, red Campion, or red Lychnis. 2. The common white Campion. 3. The uniflorous Campion. 4. The procumbent Lychnis, with great, ſtriated cups. 5. The night-flowering Campion. 6. The narrow-leaved Campion, with ſtriated cups. 7. The quadrifoliate, Virginian Lychnis. All theſe, though generally called Lychnis's and Campions, are properly Cucubali.

SILENE.

THE calyx is a permanent perianthium, formed of a ſingle leaf, claviform, and divided into five ſegments: the corolla conſiſts of five petals; their ungues are narrow, of the length of the cup, and emarginated: the limb is plane, obtuſe, and emarginated: the nectarium is compoſed of two denticles, placed in the neck of each petal: the ſtamina are ten ſubulated filaments, alternately inſerted into the ungues of the petals: the antheræ are oblong; the germen is cylindric; the ſtyles are either three or five; they are ſimple, and longer than the ſtamina; the ſtigmata are bent: the fruit is cylindric and covered; it is divided into as many cells as there are ſtyles, and opens in five places at top: the ſeeds are numerous and kidney-ſhaped.

This genus comprehends the Viſcago of Dillenius, and many of the Lychnis's of other authors.

1. *Silene hirſuta, petalis emarginatis coronatis, floribus erectis, fructibus reflexis ſubſeſſilibus alternis.* Small-flowered Campion.

The hairy Silene, with erect flowers, and ſubſeſſile, alternate fruits.

The root is oblong and white; the radical leaves are three inches long, an inch broad, and ſomewhat hairy: the ſtalk is round, hairy, infirm, and a foot and half high: the leaves are like the radical ones, but ſmaller, and ſtand two at a joint: the flowers are very ſmall and white, and their cups ſtriated; they ſtand alternately in the alæ of the leaves, toward the top of the ſtalk.

It is a native of England. Ray calls it, Lychnis ſylveſtris flore albo minimo.

2. *Silene floribus faſtigiatis coronatis, foliis ſuperioribus cordatis glabris.*

The faſtigiated and coronated-flowered Silene, with the upper leaves cordated.

The root is oblong and white; the ſtalk is ſmooth, round, jointed, and erect, and has a viſcoſity over the joints: the leaves are ſmooth; the lower ones oblong, the upper ones cordated: the flowers terminate the branches, and are moderately large and red.

It is a native of France. C. Bauhine calls it, Lychnis viſcoſa purpurea latifolia lævis.

The

The other ſpecies of Silene are, 1. The ever-green, myrtle-leaved, white Ben. 2. The hyſſop-leaved, white-flowered Silene. 3. The tall, viſcous Silene, with moſſy flowers. 4. The hairy, white Lychnis, with the flowers on one ſide only of the ſtalks. 5. The narrow-leaved, Cretic Lychnis, with long pedicles to the flowers. 6. The Lychnis, with red, ſcarce viſible flowers. 7. The elegantly variegated, garden Lychnis, called Vulnera Chriſti. 8. The hairy Lychnis, with ſtellate flowers. 9. The beautiful, pale red-flowered, hairy, narrow-leaved Lychnis. 10. The red, Carolina Campion, ſcarce at all hairy. 11. The oval-leaved, Ruſſian Silene, with emarginated petals. 12. The narrow-leaved, red Lychnis. 13. The little umbelliferous, Pyrenæan Lychnis. 14. The hairy, mountain Lychnis, with nutant flowers. 15. The dwarf, ſmooth, Alpine Lychnis. 16. The graſſy-leaved, or moſſy-mountain Lychnis.

STELLULARIA.

THE calyx is a permanent perianthium, compoſed of five ovato-lanceolate, hollow, acute, patent leaves: the corolla conſiſts of five petals, divided into two, at the extremities, the diviſion reaching down ſometimes as far as the ungues, plane, oblong, and falling very quickly: the ſtamina are ten filiform filaments, ſhorter than the corolla, and alternately longer and ſhorter; the antheræ are roundiſh; the germen is roundiſh; the ſtyles are three, capillary and patent; the ſtigmata are obtuſe; the fruit is an oval, covered capſule, formed of ſix valves, and containing one cell; the ſeeds are numerous, roundiſh, and compreſſed: ſome ſpecies have five ſtyles; others have the ſtamina of ſo little duration, that they are not to be counted.

This genus comprehends the Alſine of Tournefort.

1. *Stellularia foliis cordatis, floribus pentagynis.*
The cordated-leaved Stellularia, with five ſtyles in the flower. **Great marſh Chickweed.**

The root is oblong, ſlender, creeping, and perennial. The ſtalks are numerous, and grow to two feet high, but they are weak, and ſcarce able to ſupport themſelves erect. The leaves ſtand two at every joint; they are large, and of a pale green colour, and a little hairy. The flowers are of a fine bright white colour, and are moderately large.

It is common with us in wet places; it puts on various forms, and has been deſcribed under them, as if of various ſpecies, under the names of Alſine aquatica major, Alſine nemorum altiſſima, and Alſine marina.

2. *Stellularia foliis lanceolatis ſerrulatis.*
The Stellularia, with lanceolated, ſerrulated leaves. **Stitchwort.**

The root is oblong, ſlender, and creeping. The ſtalks are numerous, ſquare, hollow, and ten inches, or a foot, high; at every joint ſtand two rigid, narrow, graſſy, and long leaves. From the alæ of theſe, and on the tops of the ſtalks, grow the flowers; they are very large, and of a pure and bright white colour. The ſtalk is uſually divaricated into two parts toward the top, and theſe often into two more each, and a flower uſually ſtands alſo in each divarication.

It is a common plant in our fields and hedges, C. Bauhine calls it, Caryophyllus holoſteus arvenſis glaber flore majore; others, Gramen leucanthemum majus.

The other ſpecies of Stellulariæ to be mentioned are, 1. The common Chickweed. 2. The leſſer Stitchwort, or ſmall-flowered Holoſteus. 3. The very ſmall-leaved Stellularia. 4. The broader, ovated, and thin-leaved Stellularia. 5. The nightſhade-leaved Stellularia. 6. The St John's-wort-leaved Stellularia. 7. The nummularia-leaved Stellularia. 8. The round-leaved, Sicilian Stellularia. 9. The auricular-leaved Stellularia. 10. The purſlane-leaved Stellularia. 11. The white, umbellate-flowered Stellularia. 12. The ſerpyllum-leaved Stellularia. 13. The linear-leaved Stellularia. 14. The narrow-leaved, moſſy Stellularia. 15. The tamariſk-leaved Stellularia. 16. The toad flax-leaved Stellularia. 17. The ſhort, graſſy-leaved Stellularia.

lularia. 18. The fine-leaved, milk-white-flowered Stellularia; and, 19. The capillaceous-leaved Stellularia.

ARENARIA.

THE calyx is a perianthium, compoſed of five oblong, acuminated, patent, and permanent leaves: the corolla conſiſts of five oval petals, ſcarce ſo long as the leaves of the cup, and fading: the ſtamina are ten ſubulated filaments, alternately interior: the antheræ are roundiſh; the germen is oval; the ſtyles are three, and erecto-reflex: the ſtigmata are thick: the fruit is an oval, covered capſule, containing one cell, and opening into five parts at the ſummit: the ſeeds are numerous, and kidney-ſhaped.

This genus comprehends many of the ſpecies of Alſine of Tournefort and others.

1. *Arenaria foliis ſubovatis acutis ſeſſilibus, corollis calyce brevioribus.* **Small, many-ſtalked Chickweed.**

The ſuboval, acute, ſeſſile-leaved Arenaria, with flowers ſmaller than the cup.

The root is a cluſter of white fibres. The ſtalks are very numerous, round, ſlender, and ramoſe. The leaves are very ſmall, of an oval figure, but pointed at the extremity, and ſtand on ſhort pedicles; they are placed two at a joint. The whole plant grows to three or four inches high, and forms a tuft, or buſh, uſually of near as much in diameter. The flowers are white, and extremely ſmall.

It is frequent on walls and in dry places. C. Bauhine calls it, Alſine minor multicaulis.

2. *Arenaria foliis filiformibus, ſtipulis membranaceis vaginantibus.* **Purple Spurrey.**

The Arenaria, with filiform leaves, and membranaceous, vaginating ſtipulæ.

The root is oblong, thick, and white. The ſtalks are numerous and procumbent; they are green, round, jointed, and four or five inches long. The leaves ſtand two at a joint, and are oblong, narrow, and pointed at the ends, and have ſtipulæ ſurrounding the ſtalk at their baſe. The flowers are ſmall and purple; they ſtand in divarications of the ſtalk, and at the tops of the branches.

It is common in dry places. C. Bauhine calls it, Alſine ſpergulæ facie minor, ſive Spergula purpurea. The plant called Spergula marina, Sea Spurrey, is a variety only of this ſpecies.

The other more remarkable ſpecies are, 1. The plantain-leaved Arenaria. 2. The purſlane-leaved, ſea Arenaria. 3. The narrower-leaved, ramoſe Arenaria. 4. The ſhort-leaved Arenaria. 5. The large-leaved Arenaria.

Claſs the Tenth. Order the Fourth.

DECANDRIA PENTAGYNIA.

Plants which have in every flower ten ſtamina and five ſtyles.

SPERGULA.

THE calyx is a perianthium, compoſed of five permanent leaves, of an oval, obtuſe figure, hollowed and patent: the corolla conſiſts of five oval, patent petals, hollowed, larger than the leaves of the cup, and very quickly fading: the ſtamina are ten ſubulated filaments, ſhorter than the corolla; the antheræ are roundiſh; the germen is oval; the ſtyles are five, erecto-reflex, and filiform: the ſtigmata are thick: the fruit is an oval, covered capſule, formed of five valves, but containing only one cell: the ſeeds are numerous, rounded, and ſurrounded with an emarginated rim.

1. *Spergula foliis verticillatis, pedunculis dichotomis.* **Great Spurrey.**
The Spergula, with verticillated leaves, and dichotomous peduncles.

The root is oblong, ſlender, and white. The ſtalk is round, hollow, jointed, and eight or ten inches high, of a pale green colour, and, toward the top, ramoſe. The leaves are half an inch, or more, long, very narrow, and hollowed underneath; they ſtand in conſiderable numbers round the ſtalk, in a radiated manner, at every joint. The flowers are ſmall and white; the antheræ yellow.

It is common in corn-fields. C. Bauhine calls it, Alſine Spergula dicta major; others, ſimply, Spergula.

2. *Spergula foliis oppoſitis, pedunculis ſimplicibus.* **Knotty Chickweed.**
The Spergula, with leaves in pairs, and with ſimple peduncles.

The root is oblong, ſlender, and white. The ſtalks are procumbent, round, jointed, ramoſe, and five inches long. The leaves ſtand in pairs, two at every joint; the joints are frequent, and the leaves are oblong, narrow, and pointed. The flowers are large and milk-white; they ſtand on the tops of the ſtalks, and in the divarications of the branches.

It is frequent in damp places, in moſt parts of Europe. C. Bauhine calls it, Alſine nodoſa Germanica; Ruppius, Arenaria paluſtris.

CERASTIUM.

THE calyx is a permanent perianthium, compoſed of five ovato-lanceolated, acute, and patent leaves: the corolla conſiſts of five obtuſe, bifid, erecto-patent petals, of the ſize of the leaves of the cup: the ſtamina are ten filiform filaments, ſhorter than the corolla: the antheræ are roundiſh; the germen is oval: the ſtyles are five, capillary, erect, and of the length of the ſtamina; the ſtigmata are obtuſe: the fruit is a capſule, of an ovato-cylindric figure, very long, obtuſe, crooked, in part covered, containing only one cell, and opening in five places at the top: the ſeeds are numerous and roundiſh.

This genus comprehends the Myoſotis of Tournefort. There is a ſpecies which, inſtead of ten, has only five, ſtamina in each flower.

1. *Ceraſtium foliis lineari-lanceolatis obtuſis, corollis calyce majoribus.* **Large-flowered, mouſe-ear Chickweed.**
The lineari-lanceolate, obtuſe-leaved Ceraſtium, with corollæ larger than the cup.

The root is oblong and creeping. The ſtalks are round, weak, in part procumbent, and grow to about ſix or eight inches long. The leaves ſtand in pairs, and have no pedicles; they are oblong, narrow, obtuſe, and hairy. The ſtalk about it's middle divides into two parts, theſe into two more each, and ſo on to the extremities. The flowers ſtand in theſe divarications, and on the tops of the ſtalks; they are large and white.

It is found in dry, hilly paſtures. C. Bauhine calls it, Caryophyllus arvenſis hirſutus flore majore.

2. *Ceraſtium erectum villoſo-viſcoſum.* **Broad-leaved, mouſe-ear Chickweed.**
The erect, hairy, and viſcous Ceraſtium.

The root is fibrous; the ſtalks are round, erect, hairy, and five or ſix inches high. The leaves are placed two at every joint; they are of an oval figure, broad, ſhort, and obtuſe at their ends. The flowers are ſmall and white. The whole plant is hairy, and has ſomewhat viſcous about it.

It is common in dry places. Ray calls it, Alſine hirſuta myoſotis latifolia præcocior; C. Bauhine, Alſine hirſuta altera viſcoſa.

The

The other ſpecies are, 1. The long-leaved Ceraſtium, with larger flowers. 2. The ſmall-flowered, little Ceraſtium, with only five ſtamina. 3. The Alpine Ceraſtium, with procumbent ſtalks, and a large, ſnow-white flower. 4. The large, membranaceous-flowered, hairy, Alpine Ceraſtium. 5. The perfoliate, lychnis-leaved, oriental Ceraſtium. 6. The woolly, linaria-leaved Ceraſtium. 7. The creeping, hoary Ceraſtium. 8. The corniculate Ceraſtium, or horned Chickweed of Cluſius. 9. The broader and pointed-leaved Ceraſtium. 10. The narrow, rigid-leaved Ceraſtium. 11. The polygonum-leaved Ceraſtium.

AGROSTEMMA.

THE calyx is a one-leaved perianthium; it's tube is ovato-oblong, coriaceous, and marked with ten ſtriæ; it's limb is of the length of the corolla, and 'tis divided into five ſlender, permanent ſegments: the corolla conſiſts of five petals; their ungues are of the length of the tube of the cup; the limb is patent, obtuſe, and ſhorter than the cup, or, at the moſt, does not exceed it: the ſtamina are ten ſubulated filaments: the antheræ are ſimple: the germen is oval; the ſtyles are five, filiform, erect, and of the length of the ſtamina: the ſtigmata are ſimple: the fruit is a capſule of an oblong, oval figure, covered, formed of five valves, and containing only a ſingle cell: the ſeeds are numerous, kidney-ſhaped, and punctated: the receptacles are free, as many as the ſeeds, and the interior ones the longer.

Of this genus there is only one known ſpecies.

AGROSTEMMA. **Cockle.**

The root is oblong and white. The ſtalk is round, erect, hairy, of a whitiſh-green, and two feet high. The leaves ſtand in pairs, without pedicles, and ſurround the ſtalk at their baſe; they are three inches long, very narrow, and covered with long, white hairs. The flowers ſtand at the tops of the branches, and are very large, and of a beautiful deep purple colour.

It is common in our corn-fields. C. Bauhine calls it, Lychnis ſegetum major; others, Nigellaſtrum.

CORONARIA.

THE calyx is a permanent, coriaceous perianthium, formed of a ſingle leaf, of a quinquangular figure, divided into five ſegments, with ſmaller angles between: the corolla conſiſts of five petals; their ungues are of the length of the cup, and increaſed by a margin; their bracteæ are cordated, and the limb is plane; the nectarium conſiſts of two denticles in the neck of every petal: the ſtamina are ten filaments, of the length of the tube of the corolla; the antheræ are incumbent: the germen is of a ſubcylindric figure; the ſtyles are five, diſtant, and of the length of the ſtamina; the ſtigmata are ſimple: the fruit is a cylindric capſule, containing one cell, and opening at the top; the ſeeds are numerous and roundiſh.

1. *Coronaria tomentoſa, foliis ovato-lanceolatis.* **Roſe Campion.**
The woolly Coronaria, with ovato-lanceolated leaves.

The root is oblong, ſlender, white, and fibrated; the ſtalks are round, robuſt, jointed, woolly, white in colour, and three feet high: the leaves ſtand in pairs; they are large, broad, of an oval figure, and have no pedicles; they are alſo white and woolly: the flowers are large, and of a beautiful purple, and they ſtand in great abundance on the tops of the branches.

It is a native of Italy; with us it is common in gardens. C. Bauhine calls it, Lychnis Coronaria Dioſcoridis ſativa.

2. *Coronaria glabra foliis lineari-lanceolatis.* **Smooth Cockle.**
The ſmooth Coronaria, with lineari-lanceolate leaves.

The root is oblong, ſlender, white, and woody; the ſtalk is erect, ramoſe, round, jointed, ſmooth, of a pale green, and a foot and half high: the leaves ſtand in pairs; they

they are very long and narrow, of a pale green colour, and have a few white hairs on them: the flowers are large and numerous; they ſtand on moderately long pedicles, are of a pale red, and the petals are emarginated.

It is a native of Sicily. Ray calls it, Pſeudomelanthium glabrum Siculum; Boccone, Lychnis foliis glabris calyce duriore; Moriſon, Nigellaſtrum flore rubello.

LYCHNIS.

THE calyx is a roundiſh, inflated, permanent perianthium, formed of a ſingle leaf, and divided into five ſhort ſegments at the edge: the corolla conſiſts of five petals; their ungues are of the length of the cup, and are plane and membranated: the limb is plain, and the bracteæ of the petals are divided into either two or four ſegments: the nectarium is compoſed of two denticles, placed in the neck of every petal: the ſtamina are ten ſetaceous filaments, longer than the cup: the antheræ are incumbent; the germen is of a ſuboval figure; the ſtyles are five; they are longer than the ſtamina, and of a ſubulated figure; the ſtigmata are reflex and hoary: the fruit is a capſule, approaching to an oval figure, covered, formed of five valves, and contains only one cell: the ſeeds are numerous and roundiſh.

1. *Lychnis petalis quadrifidis, fructu ſubrotundo.* **Cuckow-flower.**
The round-fruited Lychnis, with quadrifid petals.

The root is oblong and creeping; the ſtalks are ſtriated, hollow, jointed, ramoſe, and two feet high, often of a reddiſh colour: the leaves ſtand in pairs, and have no pedicles; they are long, narrow, and of a deep green; the flowers ſtand on the tops of the branches, and are of a bright red: they are large, and ſo deeply divided, that the petals look ragged or fringed.

It is common in our meadows. C. Bauhine calls it, Caryophyllus laciniato flore; others, Lychnis plumaria pratenſis.

2. *Lychnis floribus faſciculatis faſtigiatis.* **Conſtantinople Flower.**
The Lychnis, with faſciculated and faſtigiated flowers.

The root is compoſed of a multitude of thick, divaricated fibres; the ſtalks are round, thick, rigid erect, hairy, and hollow; they grow to two or three feet high: the leaves ſtand two at every joint; they have no pedicles, and are large, oblong, broad, pointed at the ends, and of a deep green, hairy and rough to the touch: the flowers ſtand in large cluſters at the tops of the branches; they are large, and of a fine ſcarlet colour; the petals are bifid; the flowers ſtand very cloſe in the cluſter, and have an agreeable ſmell.

It is a native of Ruſſia and Tartary; it is frequent in our gardens, where it is called the Lychnis, or Conſtantinople Lychnis. It's flowers vary in colour, and other accidents; whence Tournefort and others have made ſeveral ſpecies of it. C. Bauhine calls it, Lychnis hirſuta flore coccineo major; J. Bauhine, Flos Conſtantinopolitanus.

AVERRHOA.

THE calyx is a ſmall, erect perianthium, compoſed of five lanceolated, permanent leaves: the corolla conſiſts of five lanceolated petals, erect in their lower part, but patent in the upper: the ſtamina are ten ſetaceous filaments, alternately ſhorter; the five longeſt are of the length of the corolla: the antheræ are roundiſh; the germen is oblong; the figure of it obſcurely pentagonal: the ſtyles are five, ſetaceous and erect; the ſtigmata are ſimple: the fruit is an apple, of a turbinated and obtuſely pentagonal figure, containing five cells. the ſeeds are angular, and are ſeparated by membranes.

It is an oriental, figured in the Hort. Mal. 47.

OXALIS.

THE calyx is a very ſhort, permanent perianthium, divided into five parts: the corolla is divided alſo into five parts, which cohere only by their ungues, and are erect, obtuſe, and emarginated: the ſtamina are ten erect, capillary filaments; the exterior ones ſhorter than the others: the antheræ are roundiſh and ſulcated: the germen is pentangular; the ſtyles are five, filiform, and of the length of the ſtamina: the ſtigmata are obtuſe; the fruit is a capſule of a pentagonal figure, containing five cells, and ſplitting longitudinally at the angles: the ſeeds are roundiſh.

This genus comprehends the Oxys of Tournefort, and the Oxyoides of Garcin. The capſule in ſome ſpecies is ſhort, and the ſeeds ſingle; in others it is long, and the ſeeds are numerous.

1. *Oxalis ſcapo unifloro, foliis ternatis, radice ſquammoſo-articulata* — Wood Sorrel.
The ſingle-flowered, ternate-leaved Oxalis, with a ſquammous-articulated root.

The root is oblong, of the thickneſs of a quill, jointed and ſcaly: the leaves ſtand three on each pedicle, and are of a cordated form: the pedicles are three or four inches long, very ſlender, and uſually reddiſh: the flowers ſtand ſingly, on pedicles of the ſame kind; they are large, and of a beautiful fleſh colour, or white ſtriated with pale red. The ſeed-veſſel is pentagonal, and, when ripe, burſts on the leaſt touch, and throws out the ſeeds with great violence.

It is common in our woods. C. Bauhine calls it, Trifolium acetoſum vulgare; others, Oxys, Acetoſella, and Lujula. The leaves are of a very agreeable acid taſte, and a conſerve is kept of them in the ſhops, as a refrigerant.

2. *Oxalis pedunculis multifloris, caule ramoſo herbaceo.* — Yellow Wood-ſorrel.
The many-flowered Oxalis, with a ramoſe, herbaceous ſtalk.

The root is oblong, ſlender, and furniſhed with a number of fibres: the ſtalks are ſlender, ramoſe, and ſtriated; the leaves ſtand three together, on long and very ſlender pedicles, and are ſomewhat hairy, and more deeply cordated than in the other ſpecies: the flowers are moderately large and yellow.

It is a native of Italy. Cluſius calls it, Oxys flore luteo.

COTYLEDON.

THE calyx is a very ſmall perianthium, formed of one leaf, and divided into five ſhort ſegments at the edge: the corolla is of a campanulato-turbinated form, lightly divided into five ſegments, which are rolled back: the nectarium is compoſed of hollow ſquammulæ, one at the baſe of each of the germina; the ſtamina are ten ſtrait, ſubulated filaments, of the length of the corolla; the antheræ are erect, and furrowed in four places; the germina are five in number; they are oblong, thick, and terminate in ſo many ſubulated ſtyles, longer than the ſtamina: the ſtigmata are ſimple: the fruit conſiſts of five oblong, ventricoſe, acuminated capſules, each formed of a ſingle valve, and opening longitudinally inwards: the ſeeds are numerous and ſmall; there is ſometimes a fifth leſs in the ſeveral parts of the fructification.

1. *Cotyledon foliis rotundis, crenatis, umbilicatis.* — Venus Navel-wort.
The round, crenated, and umbilicated-leaved Cotyledon.

The root is tuberous, and furniſhed with a number of fibres; the leaves are round, and half an inch, or more, in diameter, lightly crenated round the edges, ſometimes almoſt entire; they ſtand on pedicles of two or three inches long, which are inſerted into their middle, not at the edge: the ſtalk is round, and moderately thick; five or

six inches high, and furnished, from the top almost to the bottom, with numerous, oblong, greenish-white, striated flowers.

It grows on old walls, but is not common. I met with it in vast abundance near Shepton Mallet in Somersetshire, on the walls by the road-side. C. Bauhine calls it, Cotyledon major; J. Bauhine, Cotyledon vera radice tuberosa; and others, Umbilicus Veneris.

The other species are, 1. The shrubby, African Cotyledon, with orbiculated leaves, with purple edges. 2. The yellow-flowered, oblong-leaved Cotyledon. 3. The spotted-leaved, African Cotyledon. 4. The long, black, great-leaved, African, shrubby Cotyledon. 5. The scarlet, umbellated-flowered Cotyledon. 6. The auricula-leaved Cotyledon. 7. The orange-coloured flowered, orpine-leaved Cotyledon. 8. The oblong, tuberous-rooted Cotyledon.

SEDUM.

THE calyx is a permanent perianthium, divided into five parts, erect and acute: the corolla consists of five acuminated, lanceolated, plane, patent petals: the nectaria are five; each is a very small, emarginated squammula, affixed to the outer part of the germen, near the base: the stamina are ten subulated filaments, of the length of the corolla; the antheræ are roundish: the germina are five, oblong, and terminate in as many styles, which are shorter than the corolla; the stigmata are obtuse; the fruit consists of five erecto-patent, acuminated, compressed capsules, emarginated toward the base, and opening longitudinally upwards and downwards: the seeds are numerous and small.

This genus comprehends the Sedum and Anacampseros of Tournefort. The essential character consists in the nectarium. The Cotyledon crassula sempervivum, Rhadiola, and Tillæa are all very nearly allied to this genus: and, in general, nature has made very numerous families of the succulent plants, witness the Cactus Mesembry anthemeum, &c.

1. *Sedum foliis subovatis adnato-sessilibus, gibbis erectiusculis alternis, racemo triplici.* **Wall Pepper.**

The triple-clustered Sedum, with subovate, gibbous, alternate leaves.

The root is fibrous: the stalks are slender, round, reddish, and succulent; they grow to three or four inches in length, but are scarce able to support themselves erect: the leaves are short, pointed, thick, and succulent, and stand very close upon them: the flowers are beautiful, moderately large, and yellow.

It is frequent on walls, and sometimes on the ground. C. Bauhine calls it, Sempervivum minus vermiculatum acre; J. Bauhine, Sedum parvum flore luteo.

2. *Sedum foliis planiusculis patentibus serratis, corymbo terminatrice.* **Orpine.**

The patent, plane-leaved Sedum, with terminatory clusters of flowers.

The root consists of a great number of fleshy tubercles, with long fibres among them: the stalk is round, smooth, erect, succulent, often reddish, and grows to two feet high: the leaves stand irregularly, but very close; they are oblong, broad, of a bluish-green, often with some reddishness among it, and are serrated about the edges; the flowers stand in a kind of umbel at the top of the stalk, and are large, and of a beautiful purple: the flowers are sometimes white, and the leaves sometimes entire.

It is common in our pastures. C. Bauhine calls it, Telephium vulgare; others, Anacampseros and Crassula.

3. *Sedum foliis ſerratis, corymbo folioſo.* **Yellow Siberian Orpine.**
The ſerrated-leaved Sedum, with a folioſe corymbus.

The root is compoſed of tubercles and fibres; the ſtalks are numerous, round, ſucculent, and procumbent, except that, when in flower, they are a little raiſed; they are ſix or eight inches long: the leaves are of a lanceolated figure, and in part ſerrated: the flowers are large, yellow, and very beautiful; they ſtand in a kind of umbel, with leaves under them.

It is a new diſcovered ſpecies; it's native place Siberia. Amman calls it, Anacampſer os flore flavo.

The other principal ſpecies are, 1. The white-flowered, cylindric-leaved Sedum. 2. The compreſſed-leaved, rock Sedum. 3. The ſix-leaved, imbricated, yellow Sedum. 4. The oval, ſeſſile, gibbous-leaved Sedum. 5. The little, ſhorter-leaved Sedum; and, 6. The taller, ſucculent-leaved, ſmall-flowered Sedum.

PENTHORUM.

THE calyx is a very ſmall, permanent perianthium, formed of one leaf, divided into five acute, equal ſegments: there is no corolla; the ſtamina are ten ſetaceous, equal, permanent filaments, of twice the length of the calyx; the antheræ are roundiſh and deciduous; the germen is divided into five parts, and terminates in five ſtyles, of a conic figure, erect, and of the length of the ſtamina: the ſtigmata are obtuſe: the fruit is a ſingle capſule, divided into five parts, with five conic angles, and containing five cells: the ſeeds are numerous, very ſmall, and compreſſed.

Of this genus there is only one known ſpecies; an American, deſcribed by Gronovius, in his Fl. Virg. 51.

Claſs the Tenth. Order the Fifth.

DECANDRIA DECAGYNIA.

Plants which have in every flower ten ſtamina and ten ſtyles.

PHYTOLACA.

THERE is no calyx; the corolla conſiſts of five roundiſh, hollow, patent, and permanent petals, coloured, and turned back at their extremities: the ſtamina are ten ſubulated filaments, of the length of the corolla; the antheræ are roundiſh and lateral: the germen is of an orbiculated figure, depreſſed, and divided externally into ten lobes, and terminates in as many very ſhort ſtyles, with ſimple, permanent ſtigmata: the fruit is an orbiculated, depreſſed berry, with ten longitudinal furrows, umbilicated with the piſtils, and containing ten cells: the ſeeds are ſingle, ſmooth, and of a kidney-like ſhape.

NEURADA.

THE calyx is a very ſmall perianthium, divided into five parts, and placed upon the germen: the corolla conſiſts of five equal petals, and is larger than the cup: the ſtamina are ten filaments, of the length of the cup: the antheræ are ſimple; the germen is gibbous; the ſtyles are ten in number, and of the length of the ſtamina; the ſtigmata are ſimple: the fruit is an orbiculated, depreſſed capſule, convex on the under part, and armed with aſcendent prickles; it contains ten cells, in each of which is a ſingle ſeed.

Of this genus there is only one known ſpecies. Juſſieu has given it the name of Tribulaſtrum.

Claſs

Class the Eleventh.

DODECANDRIA.

Plants which have in every flower twelve stamina.

OF these some have only one style, others have two, and others numerous ones in each flower. According to this obvious and essential distinction, they are arranged into three orders.

Class the Eleventh. Order the First.

DODECANDRIA MONOGYNIA.

Plants which have in every flower twelve stamina and only one style.

GETHYLLIS.

THE calyx is an inflated, membranaceous spatha, of a lanceolated figure, composed of a single leaf, and containing only one flower: the corolla is formed of a single petal; the tube is extreamly long and filiform: the limb is plane, divided into six equal segments, of a lanceolated figure, and but of about a third part the length of the tube: the stamina are twelve, sometimes eighteen setaceous filaments, short, erect, and standing on the tube: the antheræ are oblong; the germen is oblong, and stands sessile within the spatha, under the receptacle of the corolla: the style is filiform, and of the length of the stamina; the stigma is trifid and obtuse; the fruit is an oblong, ventricose, triangular capsule, with three cells; the seeds are numerous.

ASARUM.

THE calyx is a coriaceous, coloured, campanulated, and permanent perianthium, formed of a single leaf, and lightly divided into three erect segments, with their extremities reflex; there is no corolla: the stamina are twelve subulated filaments, of about half the length of the cup; the antheræ are oblong, and grow to the middle of the sides of the stamina: the germen is buried within the substance of the cup; the style is cylindric, and of the length of the stamina; the stigma is stellated, and divided into six reflex segments: the fruit is a coriaceous capsule, immersed in the substance of the cup, and contains six cells; the seeds are numerous and oval.

This genus comprehends the Asarum and the Hypocistis of Tournefort and others; the Hypocistis only adds a third part to the number, of all the organs of the fructification.

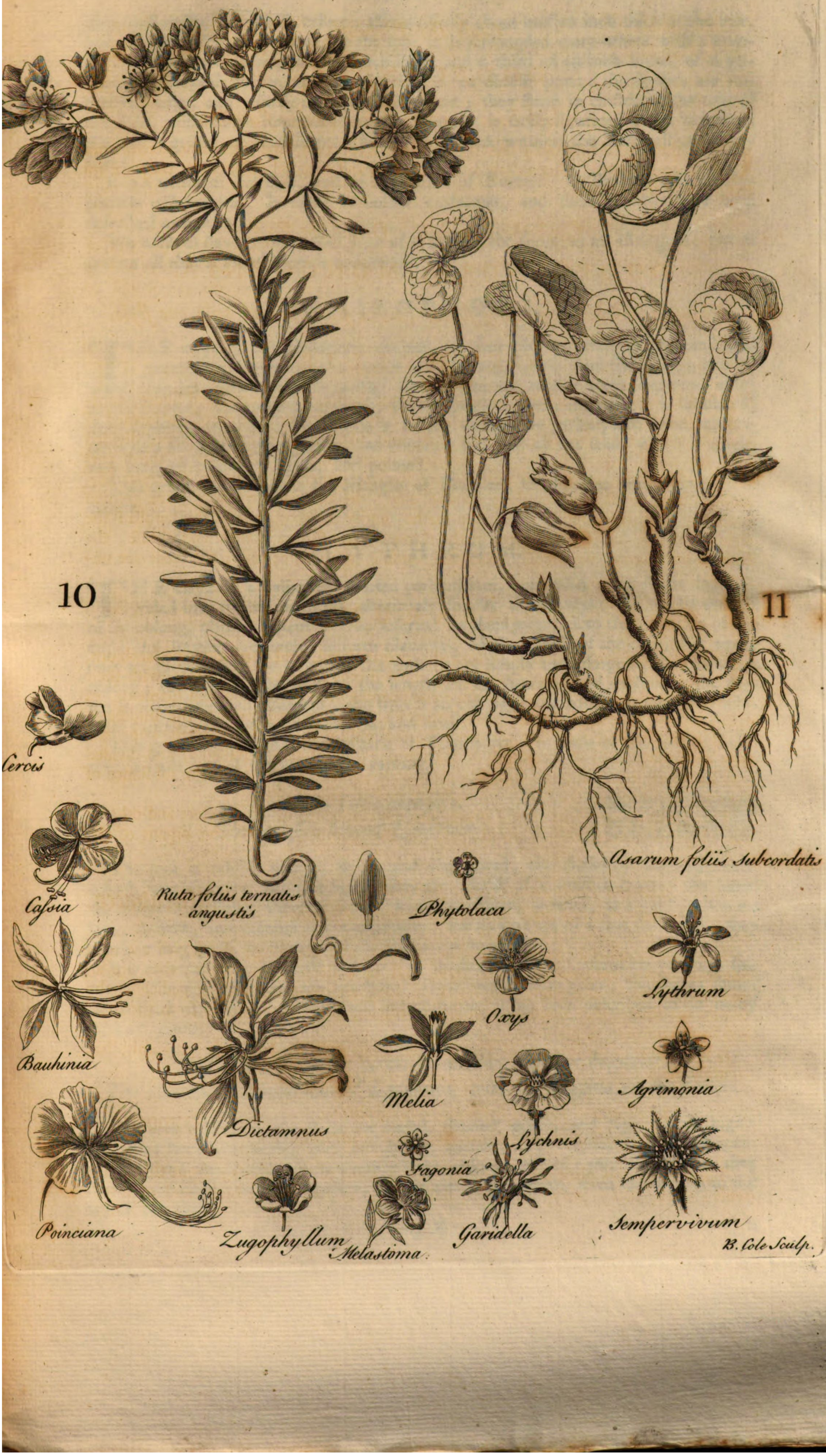
1. *Asarum foliis subcordatis petiolatis.* **Asarabacca.**
The subcordated and petiolated-leaved Asarum.

The root is oblong, angular, nodose, slender, and creeping; the leaves are of a roundish figure, auriculated, thick, rigid, and of a deep green colour; they are an inch, or more, in diameter, and stand on long and moderately thick pedicles: the flowers are small; they stand on very short pedicles, rising immediately from the root, and have a purplish tinge.

It is a native of many parts of Europe; we keep it in gardens. It is a vomit, but is rarely used.

2. *Asarum foliolis sessilibus acuminatis.* **Hypocist.**
The sessile and acuminated-leaved Asarum.

The base of this plant adheres to the root of some of the cistus's; from this it rises with a thick, fleshy, juicy, yet tough, stalk, three or four inches high, and of a reddish,


10
11
Cercis
Cafsia
Ruta foliis ternatis angustis
Phytolaca
Asarum foliis subcordatis
Bauhinia
Oxys
Lythrum
Melia
Agrimonia
Dictamnus
Lychnis
Fagonia
Poinciana
Zugophyllum
Melastoma
Garidella
Sempervivum
B. Cole Sculp.

diſh, yellowiſh, or whitiſh colour; this is uſually about half an inch thick at the baſe, and an inch and half, or more, at the top: it is ſurrounded every-where with a number of ſquammoſe leaves, half an inch long, and a third of an inch broad, of a yellowiſh or purpliſh colour, and terminating in an obtuſe point: the flowers are numerous, large, and uſually of a purpliſh colour; they ſtand in cluſters at the tops of the ſtalk, with leaves intermixed among them: it is eaſily ſeparated at it's baſe from the root it grows on, and leaves a hollow in it, but without the leaſt veſtige of any fibres.

It is a native of the Eaſt, and of ſome parts of Europe. C. Bauhine calls it, Hypociſtis officinarum. It varies in colour extreamly, and theſe varieties have been deſcribed as ſpecies.

We uſed to have an expreſſed juice of it kept in the ſhops, as an aſtringent; but at preſent all that is found there is counterfeit.

RHIZOPHORA.

THE calyx is a perianthium, divided into four oblong, erect, acuminated, and permanent ſegments: the corolla is erect, and ſhorter than the calyx; it is divided into four lanceolated ſegments: the ſtamina are twelve erect filaments, alternately ſhorter; the antheræ are ſmall; the receptacle is oval; the germen is ſubulated; there is ſcarce any ſtyle; the ſtigma is acute: there is no pericarpium: the receptacle is of a ſubovate figure, fleſhy, and contains the baſe of the ſeed, which is ſingle, very long, of a clavated figure, and pointed.

This genus comprehends the Mangles of Plumier; the ſtamina vary from eight to twelve.

LYTHRUM.

THE calyx is a cylindric, ſtriated perianthium, compoſed of a ſingle leaf, divided into twelve denticles, alternately ſmaller at the edge: the corolla conſiſts of ſix oblong, obtuſe, patent petals, inſerted by their ungues into the ſegments of the cup: the ſtamina are twelve filiform filaments, of the length of the cup; the upper ones are ſhorter than the inferior: the antheræ are ſimple and aſſurgent; the germen is oblong; the ſtyle is ſubulated, of the length of the ſtamina, and declinate: the ſtigma is orbiculated and aſſurgent; the fruit is an oblong, acuminated, covered, and bilocular capſule; the ſeeds are numerous and ſmall.

This genus comprehends the Salicaria of Tournefort. In ſome of the ſpecies, however, a ſixth part of the number is wanting.

1. *Lythrum foliis oppoſitis.* Purple-ſpiked Willow-herb.
The oppoſite-leaved Lythrum.

The root is white, woody, thick, and divaricated; the ſtalks are angular, thick, robuſt, and four or five feet high; they are uſually of a reddiſh colour: the leaves ſtand very irregularly, ſometimes two, ſometimes three, or more, at a joint; they are long, narrow, and pointed at the extremity: the flowers are of a fine florid red; they ſtand in long ſpikes on the tops of the ſtalks and branches.

It is common with us about waters. C. Bauhine calls it, Lyſimachia purpurea ſpicata. The ſtalk is ſometimes hexagonal, ſometimes quadrangular; the leaves ſometimes ſtand alternately. Under theſe ſeveral forms, it has been deſcribed as ſo many diſtinct ſpecies.

2. *Lythrum foliis alternis linearibus, floribus hexandris.*
The alternate, linear-leaved Lythrum, with ſix ſtamina in the flower.

The root is fibrous; the ſtalks are round, ſtriated, green, and eight inches high: the leaves ſtand alternately; they are oblong, narrow, and very like thoſe of the common hyſſop: the flowers are moderately large, oblong, and of a pale blue colour; they ſtand either ſingly, or two together, in the alæ of the leaves, from the bottom to the top of the plant.

It is found about waters. C. Bauhine calls it, Hyſſopifolia; Tournefort, Salicaria hyſſopi folio latiore.

The other ſpecies are, 1. The roundiſh-leaved Lythrum. 2. The very narrow-leaved Lythrum. 3. The broader, ſhort-leaved Lythrum. 4. The narrow and ſhort-leaved Lythrum.

Claſs the Eleventh. Order the Second.

DODECANDRIA DIGYNIA.

Plants which have twelve ſtamina and two ſtyles in each flower.

AGRIMONIA.

THE calyx is a ſmall, permanent perianthium, formed of a ſingle leaf, divided into five ſegments, placed on the germen, and ſurrounded with another cup: the corolla conſiſts of five plane, emarginated petals, with narrow ungues inſerted into the calyx: the ſtamina are an uncertain number of filaments, ſeven, ten, twelve, or more; they are very ſlender, ſhorter than the corolla, and inſerted into the calyx; the antheræ are ſmall, didymous, and compreſſed: the germen ſtands under the receptacle; the ſtyles are two; they are ſimple, and of the length of the ſtamina; the ſtigmata are obtuſe: there is no pericarpium: the calyx cloſes about it's neck, and becomes hard: the ſeeds are two, and round.

This genus comprehends the Agrimonia and Agrimonioides of Tournefort. In the Agrimonia, the exterior calyx grows to the interior one, and the ſeeds are two: the ſtamina from twelve to twenty; and the fruit ſurrounded with hairs. In the Agrimonioides, the exterior calyx is free from the inner one; the ſeed is ſingle, and the ſtamina are uſually ſeven.

1. *Agrimonia foliis omnibus pinnatis, fructibus hiſpidis.*
The Agrimonia, with all the leaves pinnated, and with hiſpid fruit. **Agrimony.**

The root is thick, oblong, fibrated, and of a duſky colour; the radical leaves are four or five inches long, and are compoſed of four or five pairs of oval, ſerrated pinnæ, adhering, without pedicles, to a middle rib, terminated by a ſingle, larger leaf at the end: the ſtalk is round, robuſt, hairy, erect, and two feet high; the leaves ſtand alternately on it, and are like the radical ones, but ſmaller: the flowers are large and yellow; they ſtand in a long ſlender ſpike at the top of the plant.

It is common in our paſtures. C. Bauhine calls it, Eupatorium veterum ſive Agrimonia. It has been eſteemed a cephalic, but now is not uſed

2. *Agrimonia pinnis rotundioribus, fructibus glabris.* **Baſtard Agrimony.**
The ſmooth-fruited Agrimony, with roundiſh pinnæ.

The root is oblong, thick, woody, and reddiſh; the radical leaves are pinnated, but the pinnæ are few, and of a roundiſh figure; they ſtand on long, hairy pedicles: the ſtalks are numerous, in part procumbent, hairy, reddiſh, and ramoſe; the leaves ſtand alternately, and are ſmall, ſhort, and auriculated at the baſe; the flowers are ſmall, few in number, and ſtand at the tops of the branches; they are yellow, and quickly fade: the fruit is ſmooth, and of the ſize of a wheat-corn.

It is a native of Italy; we have it in gardens. Tournefort calls it, Agrimonioides; C. Bauhine, Agrimoniæ ſimilis.

The other ſpecies are, 1. The larger-leaved, ſweet-ſcented Agrimony. 2. The ſmaller-leaved, ſweet Agrimony.

Claſs the Eleventh. Order the Third.

DODECANDRIA POLYGYNIA.

Plants that have twelve ſtamina and ſeveral ſtyles in each flower.

SEMPERVIVUM.

THE calyx is a ſmall, permanent perianthium, divided into twelve hollow, acute ſegments: the corolla conſiſts of twelve oblong, lanceolated, acute, hollow petals, a little larger than the cup: the ſtamina are twelve thin, ſubulated filaments, of half the length of the corolla; the antheræ are roundiſh: the germina are twelve in number; they ſtand erect, and are placed circularly; they terminate in the ſame number of ſtyles, which are patent, and have acute ſtigmata: the fruit are twelve oblong, compreſſed capſules, placed in an orbicular order, acuminated outwards, and opening internally: the ſeeds are numerous, roundiſh, and ſmall: the number of the ſtamina and of the germina is not abſolutely determinate and certain in this genus.

1. *Sempervivum foliis radicalibus carnoſis, caulinis, imbricatis, membranaceis, corymbo racemoſo inflexo.* **Great Houſeleek.**
The fleſhy-leaved Sempervivum, with a racemous and inflex corymbus.

The root is compoſed of a number of white fibres; the radical leaves are oblong, pointed, very thick and juicy, even at the edges, and diſpoſed in a circular form: the ſtalk is thick; ſucculent, round, and uſually reddiſh; it is thick beſet with ſmall leaves, pointed at the extremities: it grows to a foot high, and at the top divides into ſeveral ramifications, which turn back, and have on them a number of beautiful, pale red flowers.

It is common with us on houſe-tops. C. Bauhine calls it, Sedum majus vulgare.

2. *Sempervivum caule inferne nudo, lævi, ramoſo.* **Tree Houſeleek.**
The Sempervivum, with the ſtalk at the bottom naked, ſmooth, and ramoſe.

The root is brachiated; the ſtem grows to the thickneſs of a man's arm, and to three or four feet high; it is naked, and of a reddiſh colour, and ſends off a number of branches as thick as a man's thumb, which divide into others; and at the extremities of theſe ſtand round cluſters of leaves, arranged in the manner of the radical leaves of the common Houſeleek; they are of a bright green colour, oblong and broad, narroweſt at the baſe, and very lightly crenated about their edges, very ſucculent and tender. From the center of ſome of the cluſters of theſe leaves, on the upper branches of the plant, there grow thick pedicles, which ſupport numbers of large, whitiſh-yellow flowers.

It is a native of the iſlands of the Archipelago; it is common in our green-houſes Dodonæus calls it, Sedum arboreſcens majus.

Claſs the Twelfth.

ICOSANDRIA.

Plants which have about twenty ſtamina in every flower.

THE claſſical character of the Icoſandria is this: the calyx is always hollow, and formed of a ſingle leaf: the corolla is affixed by it's ungues to the ſides of the calyx; and the ſtamina are affixed either to the ſide of the calyx, or to the corolla: the ſtamina are always more than twelve, uſually twenty, or about that number; but this is not ſo determinate and certain in them, as alone to conſtitute a generical character.

Of

Of the Icosandria some have only one style in the flower, some have two, some three, some four, some five, and some a considerable number; they are, therefore, to be arranged into six orders, according to this distinction, under the names of Monogynia, Digynia, &c.

Class the Twelfth. Order the First.

ICOSANDRIA MONOGYNIA.

Plants which have hollow, monophyllous cups, with the corollæ affixed by their ungues to the sides of them, and about twenty stamina, inserted either into the corolla; or into the side of the cup; and which have only one style.

CACTUS.

THE calyx is a deciduous perianthium, formed of a single leaf, of a tubulato-concave form, standing on the germen, and covered with a kind of squammose leaves: the corolla consists of a great number of broad, obtuse petals, the exterior ones short, the interior longer and connivent: the stamina are numerous, subulated filaments, inserted into the calyx, and shorter than the corolla: the antheræ are oblong and erect: the germen stands under the tube of the cup: the style is cylindric, and of the length of the stamina: the stigma is capitated, or multifid: the fruit is an oblong, umbilicated berry, containing only one cell, and covered with little leaves, like the calyx: the seeds are numerous, roundish, and small.

This genus comprehends the Cereus, Opuntia, Melocactus, Tuna, and Pereskia of authors. The Cereus is a long, cylindraceo-angulated plant; the Melocactus a roundish and angulated one; the Opuntia is ramose and dichotomous; and the Pereskia is arborescent and foliose, but the fruit also is foliose.

1. *Cactus quatuordecim-angularis subrotundus.* The Melon-thistle.
The roundish Cactus, with fourteen angles.

The root is fibrous. The plant rises in an oblong, roundish form, resembling a melon; it's height is about twelve inches, it's diameter nine or ten: it's surface is raised into fourteen longitudinal ridges, high, and beset with tubercles, from which grow series of very sharp prickles; the tubercles are about nine on each ridge; the spines on each tubercle are about ten, and their length an inch. On the summit of the plant there stands a fine long and white downy matter, an inch high, and four inches in diameter in the tuft; among this stand longer spines, and the flowers, which are oblong, and of a fine red colour.

It is a native of the warmer parts of America; C. Bauhine calls it, Melocactus Indiæ occidentalis.

2. *Cactus sexangularis longus rectus.* The Torch-thistle.
The long, sexangular, strait Cactus.

The root is fibrous. The plant consists of a single stem, or body, of twenty, thirty, or more, feet in height, and of about five inches in diameter; of an angular figure, and deep green colour, and armed with clusters of sharp, firm spines, growing from tubercles, placed along the ribs; the number of ribs is, in general, six, but this is not certain; toward the top there are often eight or ten, and, toward the bottom, only five, The flowers grow from the ribs, usually about the middle of the plant; they are, when open, of the size of a large rose, and consist of not less than forty petals; the outer ones purplish or greenish, the inner ones white; these stand but a very little time.

It is a native of Surinam, and many other parts of South America; we have it in our stoves. Herman and Ray call it, Cereus erectus altissimus Surinamensis.

3. *Cactus*

3. *Cactus compreſſus articulatus ramoſus, articulis ovato-oblongis ſubinermibus.*

The compreſſed, articulated Cactus, with oval joints, and few prickles.

The Cochineal Plant.

The root is fibrous. The plant is compoſed of a number of articulations, and grows to ten or twelve feet high. An oval body, thick, ſucculent, green, and eight or ten inches long, and ſix in diameter, firſt appears above the ground; from this grows another ſuch body, and from this others, each of which again produce more of the ſame kind, ſo as, in the whole, to compoſe a ramoſe body, compoſed of theſe articulations, fixed to another without pedicles; they are thick, ſucculent, and full of tubercles, from each of which grow a number of ſpines, but in this ſpecies they are leſs rigid and prickly than in the former. The flowers grow immediately out of the ſurface of theſe articulations; they are very large, and of a beautiful deep red, or of a paler red, ſtriated with a deeper. The fruit is large and ſucculent; it's juice of a blood red.

It is a native of Jamaica, and other parts of the Weſt Indies, but no where is ſo plentiful as in Mexico, where the Cochineal animal feeds on it. Dillenius calls it, Tuna mitior flore ſanguineo; others, Opuntia coccinellifera.

4. *Cactus caule tereti arboreo ſpinoſo, foliis lanceolato-ovatis.*

The arboreſcent, round-ſtalked Cactus, with lanceolato-oval leaves.

The Pereskia.

The root is moderately thick, and divaricated. The plant aſſumes the form of a common tree. The trunk is thick, round, and beſet with ſpines, which are very rigid, long, and ſharp. The leaves ſtand irregularly; they have a downy matter at their inſertion on the ſtalks, and are of an oblong, and ſomewhat pointed, figure, thick, ſucculent, and green. The flowers are white, the fruit yellow and ſucculent, and covered with a kind of little leaves.

It is a native of Jamaica. Dillenius calls it, Pereſkia aculeata, flore albo, fructu flaveſcente; Plukenet, Portulaca Americana latifolia ad foliorum ortum lanugine obducta, longioribus aculeis horrida.

Theſe four ſpecies expreſs the four principal forms and manners of growing of the Cacti.

The other ſpecies are very numerous. Thoſe more uſually kept in our ſtoves are, 1. The round Cactus, with large tubercles. 2. The long, quadrangular Cactus, with compreſſed angles. 3. The tall, octangular Cactus, with obtuſe angles. 4. The common, oval, articulated Cactus, or Opuntia. 5. The great, articulated Cactus. 6. The bluiſh-flowered, great-ſpined, oval-jointed Cactus. 7. The climbing Cactus, with five obtuſe angles. 8. The little, ten-angled, very-ſpinoſe Cactus. 9. The triangular, ſcandent, articulated Cactus.

PHILADELPHUS.

THE calyx is a permanent perianthium, formed of a ſingle leaf, divided into four acuminated ſegments: the corolla conſiſts of four large, patent, roundiſh, emarginated petals: the ſtamina are twenty ſubulated filaments, of the length of the cup: the antheræ are erect and quadriſulcous: the germen ſtands below the receptacle: the ſtyle is divided into four parts: the ſtigmata are ſimple: the fruit is an oval capſule, pointed at each end, and ſurrounded in the middle by the cup; it is compoſed of four valves, and contains as many cells: the ſeeds are numerous, oblong, and ſmall.

This genus comprehends the Syringa of authors. There is only one known ſpecies of it.

PHILADELPHUS.

The root is brachiated and ſpreading. The ſhrub grows to ſix or eight feet high. It's bark is brown; it's wood brittle. The young ſhoots are long and green. The

leaves ſtand in pairs, and are large, oblong, broad, pointed at the extremity, and crenated about the edges; they are two inches and a half long, and near two inches broad, rugoſe, and of a pale green colour. The flowers ſtand in little cluſters, on the extremities of the branches; they are large, white, and very fragrant.

It is a common ſhrub in our gardens. C. Bauhine calls it, Syringa alba, ſive Philadelphus Athenæi.

EUGENIA.

THE calyx is a permanent perianthium, compoſed of a ſingle leaf, divided into four oblong, obtuſe, hollow ſegments, and pregnant with a germen: the corolla conſiſts of four oblong, obtuſe, hollow petals, and is twice as large as the cup: the ſtamina are a great number of filaments, of the length of the corolla, and inſerted into the calyx: the antheræ are ſmall; the germen is turbinated, and ſtands under the receptacle: the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is ſimple: the fruit is a quadrangular, coronated drupe, containing only one cell: the ſeed is a roundiſh, ſmooth nut.

EUGENIA. The Silver-tree.

The root is long and brachiated. The tree grows to twenty feet high; it's trunk is ſtrait and regular; it's branches long; it's bark of a pale grey, and variegated with ſpots of a bright ſilvery white. The leaves ſtand in pairs; they are ſmooth, very thin, and of a greeniſh-yellow, an inch long, and near as broad at the baſe, whence they gradually diminiſh to a point; they are undivided at the edges, and have ſcarce any pedicles. The flowers are ſmall and whitiſh, and grow at the alæ of the leaves.

It is a native of Jamaica. Sir Hans Sloane calls it, Myrtifolia arbor cortice argenteo, flore pallide albicante.

PSIDIUM.

THE calyx is a campanulated perianthium, compoſed of a ſingle leaf, lightly divided into five oval ſegments: the corolla conſiſts of five oval, hollowed, patent petals: the ſtamina are a great number of filaments, ſhorter than the corolla, and inſerted into the calyx: the antheræ are ſmall; the germen is roundiſh, and ſtands under the receptacle: the ſtyle is ſubulated, and very long: the ſtigma is ſimple: the fruit is a very large, oval berry, containing one cell, and coronated by the calyx: the ſeeds are numerous, very ſmall, and nidulant.

This genus comprehends the Guaicana of Tournefort.

Pſidium ramis quadrangulis.
The quadrangular-branched Pſidium.

The root is large and ſpreading; it's bark is of a browniſh-red. The tree grows to five-and-twenty feet high, and it's trunk to a foot and a half in diameter. The bark of the young ſhoots is reddiſh, or greeniſh; the leaves are oblong, thick, and pointed at the ends, of a dark green colour, ſmooth on the upper ſide, and ſcabrous underneath. The flower is of the ſize of that of a quince, and white. The fruit is of the ſize of a moderately large pear, uſually of a reddiſh colour, and of an agreeable taſte; but this, as well as the colour, is very different in the different ſtages of maturity. The fruit is eaten, and the bark of the root is uſed as an aſtringent.

PUNICA.

THE calyx is a permanent perianthium, of a campanulated figure, compoſed of a ſingle leaf, coloured, and divided into five ſegments at the edge: the corolla conſiſts of five roundiſh, erecto-patent petals, inſerted into the calyx: the ſtamina are numerous, capillary filaments, ſhorter than the cup, and inſerted into the calyx: the antheræ are oblong; the germen ſtands below the receptacle; the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is capitated: the fruit is a large, globoſe apple, coronated with the calyx, and formed into nine cells: the ſeeds are numerous, roundiſh,

roundiſh, and ſucculent; the receptacle is membranaceous, and divides every cell of the fruit into two parts.

Of this genus there is only one known ſpecies.

PUNICA. The Pomegranate-tree.

The root is brachiated and large. The form of the plant is naturally that of a ſhrub, though, by culture and management, it ſometimes arrives at the height of a ſmall tree. The branches are long; the twigs long, ſlender, angular, and armed with ſharp and rigid ſpines. The leaves ſtand inordinately; they are oblong, moderately broad, of a bright green, obtuſely pointed, and placed on oblong pedicles, of a reddiſh colour. The flowers grow from the ſides of the branches; they are large, and of a fine deep red colour. The fruit is of the bigneſs of an orange, round, and covered with a hard rind.

It is a native of Italy, Spain, and Africa. Lobel calls it, Malus Punica; Tournefort, Punica quæ malum granatum fert. The flowers are ſometimes double, in which ſtate they are called Balauſtines, or the flowers of the wild pomegranate, and the fruit varies greatly in ſize and colour with culture; hence it is that we meet with the names of many ſpecies of the Punica, though they are but imaginary ones.

The flowers of the Pomegranate, and the bark of the fruit, are ſtrongly aſtringent.

MYRTUS.

THE calyx is a permanent perianthium, formed of a ſingle leaf, erect, divided into five ſegments, and pregnant with a germen at it's baſe: the corolla conſiſts of five large, oval, undivided petals, inſerted into the calyx: the ſtamina are a number of capillary filaments, of the length of the corolla, and inſerted into the calyx: the antheræ are ſmall; the germen ſtands below the receptacle; the ſtyle is ſimple, and not ſhorter than the ſtamina: the ſtigma is obtuſe: the fruit is an oval berry, umbilicated by the cup, ſhut up, and contains three cells: the ſeeds are ſingle, and kidney-ſhaped.

Myrtus floribus ſolitariis, calyce fructus diphyllo. Common Myrtle.
The ſingle-flowered Myrtus, with the cup of the fruit diphyllous.

The root is brachiated and ſpreading. The trunk is thick and robuſt, and it's bark reddiſh. The ſhrub grows to ſix, eight, or more, feet in height. The leaves are an inch long, half an inch broad, pointed at the ends, and of a ſtrong green. The flowers ſtand ſingly, and are large and white. The berries are oblong, and black, when ripe.

It is a native of Italy, France, and Aſia; it is common in our gardens. C. Bauhine has made three ſpecies from this one, in it's different appearances. He calls them, 1. Myrtus Bætica latifolia. 2. Myrtus minor vulgaris. 3. Myrtus foliis minimis et mucronatis; it's leaves, indeed, differ extremely in the various plants of it.

The other ſpecies are, 1. The broad and more obtuſe-leaved Myrtus. 2. The cluſter, bay-leaved Myrtus. 3. The narrow-leaved Myrtus. 4. The broad, ſhort-leaved, cluſtered Myrtus. Several of theſe ſpecies have their berries ſometimes white, when ripe; and this has been made a new reſource of imaginary ſpecies.

GARCINA.

THE calyx is a permanent perianthium, formed of four roundiſh, obtuſe, hollow, patent leaves: the corolla conſiſts alſo of four roundiſh, hollow, patent petals, and is ſomewhat larger than the cup: the ſtamina are ſixteen erect filaments, placed ſo as to form a cylindric body; they are ſimple, and ſhorter than the cup: the antheræ are roundiſh; the germen is ſuboval; the ſtyle is ſcarce apparent: the ſtigma is plane, patent, and peltated; it is permanent, and is divided into eight obtuſe ſegments: the fruit is a large, coriaceous, globoſe berry, containing only one cell, and coronated: the ſeeds are eight, convex on one ſide, angular on the other, villoſe and fleſhy.

AMYGDALUS.

THE calyx is a deciduous perianthium, formed of a ſingle leaf, of a tubulated figure, divided into five obtuſe, patent ſegments: the corolla conſiſts of five petals, of an oblong, oval figure, obtuſe, hollow, and inſerted into the calyx: the ſtamina are thirty filiform, erect filaments, ſhorter than the corolla, and inſerted into the calyx: the antheræ are ſimple: the germen is roundiſh and villoſe: the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is capitated: the fruit is a great hairy, roundiſh drupe, with a longitudinal furrow: the ſeed is an oval, compreſſed nut, with the ſutures prominent on each ſide, with reticulated furrows, and punctated with holes.

This genus comprehends the Amygdalus and the Perſica of authors. The Amygdalus has the fruit dry and coriaceous; the Perſica has it ſoft and pulpy.

1. *Amygdalus foliis petiolatis, ſerraturis infimis glandulosis.* **The Almond-tree.**

The Amygdalus, with petiolated leaves, and the lower ſerratures glandulous.

The roots are brachiated, large, and ſpreading, The trunk is moderately large; the tree twenty or thirty feet high. The leaves are long, narrow, pointed at the extremities, and ſerrated about the edges. The flowers are moderately large, and beautiful; they are of a pale fleſh colour. The fruit is an inch long, and the ſtone nearly of it's whole ſize, ſomewhat compreſſed, and contains an oblong, compreſſed kernel, which is the Almond.

It is a native of Africa, but is now common throughout Europe. The Bitter Almond is the produce of the ſame ſpecies with the ſweet. Authors diſtinguiſh them, indeed, by the names of Amygdalus dulcis, and Amygdalus amara; but there is *no* diſtinction, except in the taſte of the kernel.

The oil of the bitter Almond is ſweet, and much more frequent than that of the other, being almoſt univerſally ſold in the ſhops under it's name.

2. *Amygdalus foliorum ſerraturis omnibus acutis.* **The Peach-tree.**

The Amygdalus, with all the ſerratures of the leaves acute.

The root is brachiated and ſpreading. The trunk grows to five inches in diameter; the branches are very long and ſpreading, and the tree, when a ſtandard, will riſe to twenty feet high. The bark is a reddiſh-brown, and ſmooth; the wood firm and reddiſh. The leaves are long, and ſomewhat broad, of a gloſſy green, ſerrated about the edges, and of a bitteriſh taſte. The flowers are of a pale red; the fruit large and ſucculent, and the ſtone large.

It is a native of Perſia, and is thence called Malus Perſica by authors. A ſyrup of the flowers is a gentle emetic.

Authors have made many imaginary ſpecies of the Peach-tree, from the ſlight differences of the fruit; but theſe are mere varieties. The only really diſtinct ſpecies we have to mention of this genus, beſide the two already deſcribed, are, 1. The dwarf, Indian Almond; and, 2. The dwarf, African Peach.

PRUNUS.

THE calyx is a deciduous perianthium, compoſed of a ſingle leaf, of a campanulated form, and divided into five obtuſe, hollow, reflex ſegments, even at the edges: the corolla conſiſts of five large, roundiſh, hollowed, emarginated petals, inſerted into the calyx by their ungues, and patent: the ſtamina are about twenty-five filaments, of a ſubulated figure, nearly of the length of the corolla, and inſerted into the calyx: the antheræ are didymous and ſhort: the germen is roundiſh and entire: the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is orbiculated and entire: the fruit is a roundiſh drupe, with a longitudinal furrow: the ſeed is a roundiſh, compreſſed, acute nut, with the ſutures ſtanding out each way in an edge.

This

This genus comprehends the Prunus and Armeniaca, the Plum and the Apricot of authors.

1. *Prunus foliis lanceolato-ovatis.* **The common Plum-tree.**
The Prunus, with lanceolato-oval leaves.

The root is brachiated and ſpreading. The tree grows to a conſiderable height. The leaves are oblong, broad, approaching to an oval figure, but pointed at the end, of a dark green colour, and ſerrated at the edges. The flowers are large, and white. The fruit is naturally large, blackiſh, and it's pulp of a ſweet taſte.

It is a native of moſt parts of Europe, and has been ſo altered by culture, as to produce a vaſt variety in it's fruit; whence authors have made many new ſpecies, on a very bad foundation. Authors call this native ſtate of the tree Prunus, Prunus domeſtica, and Prunus fructu magno dulci atro cæruleo.

The Prunes of the ſhops are the fruit of this dried.

2. *Prunus foliis ovatis cordatis.* **The Apricot-tree.**
The Prunus, with cordated, oval leaves.

The root is large and ſpreading. The tree grows to thirty feet, or more, in height, and it's trunk to a conſiderable thickneſs. The leaves are of a roundiſh figure, approaching to oval, cordated at the baſe, and ſerrated round the edges. The flowers are large, beautiful, and of a pale red colour. The fruit is large, and it's pulp ſweet. Culture makes a great variation in the fruit of this tree, and thoſe who make diſtinct ſpecies of the great and little, the red, the black, and the yellow Plums, have made as many alſo of the Apricots. All this, however, is erroneous; theſe are varieties, not ſpecies.

The Apricot-tree is a native of Armenia.

3. *Prunus ſpinoſa foliis lanceolatis.* **The Sloe Buſh.**
The ſpinoſe Prunus, with lanceolated leaves.

The root is ſpreading; the ſhrub low; it's bark blackiſh. The leaves are of a figure approaching to oval, but pointed at the extremities, and ſerrated. The flowers are ſmall and white; the fruit ſmall, round, and of a bluiſh-black colour.

It is common in our hedges. It's fruit is aſtringent, and an inſpiſſated juice of it is called the German Acacia, and uſed in the place of the true Succus Acaciæ.

The reader will eaſily be convinced that a diſſertation on the variety of Plums and Apricots would be the buſineſs of a writer on gardening, not on Botany. Linnæus has included, in ſome of his lateſt works, the Ceraſus and Padus, in this genus of Prunus, but the figure and ſtructure of the fruit, &c. forbid our aſſent to this.

CERASUS.

THE calyx is a deciduous perianthium, formed of a ſingle leaf, of a campanulated figure, lightly divided into five obtuſe, hollow, ſerrated, and reflex ſegments: the corolla conſiſts of five hollow, roundiſh, large, emarginated patent petals, inſerted into the calyx: the ſtamina are about thirty ſubulated filaments; they are nearly of the length of the corolla, and are inſerted into the calyx: the antheræ are didymous and ſhort: the germen is roundiſh, and has a longitudinal furrow in it: the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is orbiculated, and emarginated on one ſide: the fruit is a drupe, of a ſubgloboſe figure, with a longitudinal furrow: the ſeed is a nut, of a ſubgloboſe figure, with the inferior ſuture riſing into a little edge.

1. *Ceraſus foliis ovato-lanceolatis.* **The Red Cherry-tree.**
The Ceraſus, with ovato-lanceolate leaves.

The root is brachiated and large. The tree grows to a moderate ſize, and ſpreads out greatly in branches, The leaves are oblong, ſerrated, and pointed at the extremities. The flowers are large and white; the fruit is naturally round, large, and

red. The Heart Cherry, the May-duke Cherry, and all the other large red Cherries, are varieties of this ſpecies, and are moſtly owing to culture.

2. *Ceraſus foliis ovatis.* The Rock Cherry.
The oval-leaved Ceraſus.

The root is brachiated; the trunk thick, and uſually tortuous; the tree not very tall, but ſpreading. The leaves are oval, approaching to round, but little longer than wide, of a bright green colour, and ſerrated round the edges. The flowers are large, white, and fragrant. The fruit is ſmall, roundiſh, black, and bitter to the taſte: it's juice is of a deep purple colour.

It is a native of many of the northern parts of Europe. J. Bauhine calls it, Ceraſus ſylveſtris amara Mahaleb putata; C. Bauhine, Ceraſo affinis; Camerarius, Mahaleb.

The other really diſtinct ſpecies of this genus are, 1. The round-leaved, Alpine Ceraſus. 2. The cluſter Ceraſus. 3. The ſmall-fruited Ceraſus.

PADUS.

THE calyx is a permanent perianthium, formed of a ſingle leaf, of a campanulated figure, villoſe at the baſe, divided into five ſegments, patent, and ſcarce at all reflex: the corolla conſiſts of five large, roundiſh, patent petals, inſerted by their ungues into the edge of the calyx: the ſtamina are twenty or thirty filaments, of a ſubulated figure, nearly of the length of the corolla, and inſerted into the calyx: the antheræ are roundiſh; the germen is roundiſh; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is obtuſe and entire: the fruit is a roundiſh drupe: the ſeed is an oval, acuminated nut, with a furrow: the receptacle of the flower, which inveſts the inner ſurface of the cup, is hairy in this genus.

This comprehends the Lauroceraſus, and Ceraſus avium of authors.

1. *Padus glandulis duabus dorſo foliorum innatis.* The Laurel.
The Padus, with two glandules on the back of the leaf.

The root is brachiated and large. The tree grows to a moderate ſize; it's trunk is thick, and uſually tortuous; the young ſhoots are green. The leaves are green all the winter; they are four inches long, two broad, even at the edges, and of a firm ſtructure. The flowers are ſmall, white, and cluſtered together. The fruit is large, ſomewhat oblong, and black, when ripe.

It is a native of the Eaſt. Cluſius firſt brought it into Europe, in 1576; it is now every-where in our gardens. Authors call it, Lauroceraſus, and Lauroceraſus vulgaris.

2. *Padus glandulis duabus baſi foliorum ſubjectis.* The Bird's Cherry.
The Padus, with two glandules at the baſe of the leaves.

The root is brachiated and ſpreading. The tree grows to a moderate height. It's bark is brown; it's young ſhoots reddiſh. The leaves are oblong, broad, ſerrated, and of a dark green colour on the upper ſide, and whitiſh underneath, when the fruit is ripe. The flowers are large and white; they ſtand on ſeparate pedicles, on a long ſtalk, forming a kind of ſpike. The fruit is black, when ripe, and of a ſweet taſte, but not very agreeable.

It is a native of the north of England. C. Bauhine calls it, Ceraſus racemoſa ſylveſtris fructu non eduli.

The only known ſpecies, beſide theſe, is the leſſer Portugal Laurel, with oval leaves.

STYRAX.

THE calyx is a ſhort, erect, cylindric perianthium, formed of a ſingle leaf, and divided into five ſegments: the corolla is of an infundibuliform ſhape, and conſiſts of a ſingle petal: the tube is cylindric, and no longer than the cup: the limb is large, patent, and divided into five lanceolated, obtuſe ſegments: the ſtamina are numerous filaments, placed in a circular direction, of a ſubulated figure, and inſerted

ſerted into the corolla: the antheræ are oblong and ſtrait; the germen is roundiſh; the ſtyle is ſimple, and of the length of the ſtamina; the ſtigma is truncated; the fruit is a roundiſh drupe, having only one cell; the ſeeds are two, roundiſh, acuminated nuts, convex on one ſide, and plane on the other.

Of this genus there is only one known ſpecies.

STYRAX. The Storax-tree.

The root is large and divided; the tree grows to twenty or thirty feet high; the bark is of a duſky brown, the young roots reddiſh: the leaves ſtand alternately; they are of a roundiſh figure, but pointed at the extremities, and ſomewhat reſemble thoſe of the quince; they are an inch and a half long, nearly as broad, and whitiſh underneath: the flowers ſtand five or ſix together; they are large, white, and fragrant: the fruit is fleſhy, and of the ſize of a hazel nut.

The tree is a native of ſeveral parts of Europe, and of the Eaſt. In the latter part of the world it affords the fragrant reſin, called Styrax, on wounding it's trunk. C. Bauhine calls it, Styrax folio mali Cotonei; others ſimply, Styrax arbor.

SAMYDA.

THE calyx of the Samyda is ſituated under the germen, and there is no corolla: theſe characters ſufficiently diſtinguiſh it from all the other genera, without a farther deſcription.

Claſs the Twelfth. Order the Second.

ICOSANDRIA DIGYNIA.

Plants which have hollow, monophyllous cups, with the corollæ affixed by their ungues to the ſides of them, and about twenty ſtamina inſerted either into the corolla, or into the ſide of the cup, and which have in every flower two ſtyles.

CRATÆGUS.

THE calyx is a permanent, concave, patent perianthium, compoſed of a ſingle leaf, and divided into five ſegments: the corolla conſiſts of five hollow, roundiſh, ſeſſile petals, fixed to the cup: the ſtamina are twenty in number; they are of a ſubulated figure, and inſerted into the cup: the antheræ are roundiſh; the germen is placed under the receptacle; the ſtyles are two, filiform and erect: the ſtigmata are capitated: the fruit is a fleſhy, roundiſh, umbilicated berry: the ſeeds are two, oblong, diſtinct, and cartilaginous.

1. *Cratægus foliis ovatis, repando-angulatis, ſerratis.* Virginia Thorn.
The Cratægus, with oval, ſerrated, repando-angulated leaves.

The root is ſpreading; the tree grows to twenty feet high, and is ramoſe: the leaves are divided deep in many places, but are in the whole of an oval figure, or approaching to ſuch; the flowers are moderately large and white: the fruit is of the ſize of of a ſmall nut, like the common haw in ſhape, but of a fine ſcarlet colour: the branches of the tree are armed with ſharp and robuſt thorns.

It is a native of Virginia. Plukenet calls it, Meſpilus apii folio Virginiana fructu, amplo coccineo.

2. *Cratægus*

2. *Cratægus foliis ovatis inæqualiter ſerratis.* **The wild Ser-**
The Cratægus, with oval, unequally ſerrated leaves. **vice-tree.**

The root is brachiated; the tree not very tall, but ſpreading, often aſſuming the form of a ſhrub: the trunk is covered with a brown bark; the young ſhoots with a duſty white one: the leaves are broad, and ſomewhat oval; the flowers are ſmall, and of a greeniſh colour; the fruit is of a pear-faſhioned ſhape, and eſculent, but not very pleaſant to the taſte.

The tree is wild in the North of England. Ray calls it, Sorbus Anglica ſylveſtris.

The other ſpecies are, 1. The common white Thorn. 2. The oblong-leaved Cratægus. 3. The broad-leaved Cratægus. 4. The roundiſh-leaved Cratægus, or Aria of Theophraſtus. 5. The long, ſerrated-leaved Cratægus, called the Cotonaſter. 6. The arbutus-leaved Cratægus. 7. The laciniated-leaved Cratægus. 8. The great-leaved Cratægus, with robuſt ſpines.

Claſs the Twelfth. Order the Third.

ICOSANDRIA TRIGYNIA.

Plants which have hollow, monophyllous cups, with the petals affixed by their ungues to the ſides of them, and have about twenty ſtamina inſerted either into the corolla, or into the ſides of the cup, and in every flower three ſtyles.

SORBUS.

THE calyx is a permanent, concavo-patent perianthium, formed of a ſingle leaf, divided into five ſegments: the corolla conſiſts of five hollow, roundiſh petals, inſerted into the calyx; the ſtamina are twenty ſubulated filaments, inſerted into the calyx: the antheræ are roundiſh: the germen ſtands below the receptacle; the ſtyles are three, filiform and erect; the ſtigmata are capitated; the fruit is a ſoft, globoſe, umbilicated berry; the ſeeds are three, oblong, diſtinct, and cartilaginous.

1. *Sorbus foliis pinnatis, glabris.* **The Quicken-**
The pinnated, ſmooth-leaved Sorbus. **tree.**

The root is very long and divaricated; the tree grows to thirty feet high; it's trunk is ſtrait and even; it's branches numerous: the leaves are pinnated and large; the pinnæ are ſmooth, of an oblong figure, ſerrated at the edges, and whitiſh underneath: the flowers are white, moderately large, and ſtand in umbels: the fruit is moderately large, and of a fine bright red, with an admixture of yellow in it.

It is a native of many parts of England. J. Bauhine calls it, Sorbus aucuparia; C. Bauhine, Sorbus ſylveſtris foliis domeſticæ ſimilis.

2. *Sorbus foliis pinnatis incanis.* **The true Ser-**
The Sorbus, with pinnated, hoary leaves. **vice-tree.**

The root is ſimple and perpendicular; the tree is large; it's branches numerous and long; the leaves are pinnated, each conſiſting of eight or nine pairs of pinnæ, of an inch in length, and half an inch in breadth, ſtanding on long pedicles, hairy and ſerrated at the edges: the flowers are white, and ſtand in umbels: the fruit is large, oblong, turbinated, and fleſhy.

It is common, wild, in Italy and Germany. C. Bauhine calls it, Sorbus ſativa; others, Sorbus legitima.

The other ſpecies are, 1. The oval-fruited Sorbus. 2. The ſmall-fruited Sorbus.

Class the Twelfth. Order the Fourth.

ICOSANDRIA TETRAGYNIA.

Plants with hollow, monophyllous cups, with the petals affixed by their ungues to the sides of them, with about twenty stamina inserted either into the corolla, or the sides of the cup, and with four styles.

TETRAGONIA.

THE calyx is a permanent perianthium, formed of four oval, deflexo-plane, coloured petals, revolute at the edge, and standing on the germen: there is no corolla: the stamina are twenty capillary filaments, shorter than the cup; the antheræ are oblong and incumbent: the germen is roundish, quadrangular, and placed under the receptacle; the styles are four, subulated, crooked, and of the length of the stamina: the stigmata are longitudinal and hoary: the fruit is a coriaceous crust, formed into a kind of square figure, by four longitudinal alæ: the opposite angles narrower; the seed is single, osseous, and contains four cells: the nuclei are oblong; four is the proper and natural number of the styles in the flower, but only two are sometimes visible.

Of this genus there is only one known species, which is sufficiently distinguished by these characters.

Class the Twelfth. Order the Fifth.

ICOSANDRIA PENTAGYNIA.

Plants which have monophyllous, hollow cups, with corollæ affixed by their ungues to the sides of them, with about twenty stamina inserted into the corolla or the cup, and with five styles.

AIZOON.

THE calyx is a permanent perianthium, formed of a single leaf, divided into five lanceolated segments; there is no corolla: the stamina are numerous, capillary filaments, inserted in several series into the sinus of the cup, and not equally distributed by the receptacle: the antheræ are simple; the germen is pentagonal; the styles are five, and simple; the stigmata are simple: the fruit is a ventricose capsule, of a pentagonal figure, and formed of five cells: the seeds are numerous and roundish; the stamina are in general placed three in a divisure of the calyx.

This genus comprehends the Ficoidea of Nissole.

MESEMBRYANTHEMUM.

THE calyx is a permanent perianthium, divided into five acute, patent, short segments: the corolla consists of a multitude of petals, of a lanceolated figure, narrow, formed into several series a little longer than the cup, and cohering just at the base by their ungues: the stamina are numerous, capillary filaments, of the length of the cup; the antheræ are incumbent: the germen stands below the receptacle, and is coronated, with five obtuse angles: the styles are five, usually subulated, and erecto-reflex; the stigmata are simple: the fruit is a fleshy, roundish capsule, with a radiated umbilicus, and with a number of cells equal to that of the styles: the seeds are numerous and roundish.

This genus comprehends the Ficoides of Tournefort. The number of the styles is sometimes ten; sometimes they, and the segments of the calyx, are only four.

1. *Mesembryanthemum vesiculis hispidum, foliis alternis ovatis obtusis undulatis.* **The Ice Plant.**

The blistery, alternate, oval, obtuse, and undulated-leaved Mesembryanthemum.

The root is fibrose and white; the stalk is round, succulent, variously divaricated, and of a pale green; the leaves are short, obtuse, undulated, and succulent: these and the stalks are beautifully spangled, with vesicles containing a clear fluid, and much resembling little pieces of ice: the flowers are numerous, small, and red.

It is a native of Africa, but is common in our stoves. Dillenius calls it, Mesembryanthemum crystallinum Plantaginis folio undulato.

2. *Mesembryanthemum foliis alternis teretibus obtusis.* **Flowering Kali.**

The alternate, cylindric, and obtuse-leaved Mesembryanthemum.

The root is oblong, slender, yellowish, and furnished with a few fibres; from the head of this rise two thick, fleshy, broad leaves, which lie flat on the ground, or are but little raised from it. From the center of these rise two others of a finger's length, somewhat furrowed and roundish, and thick at the ends: from these rise several more pairs of the like leaves, and at length the stalks; these are slender, rounded, and procumbent, or but little erect: the leaves stand alternately on them, and are rounded or cylindric, and obtuse at the points: the flowers stand in the alæ of these, on thick pedicles; they are white; the antheræ yellow.

It is a native of Egypt, and of some of the southern parts of Europe; it grows on the sea-shores. C. Bauhine calls it, Kali crassulæ minoris folio; Columna, Kali Neapolitanum Aizoides.

The other species are very numerous; the more singular and distinct are, 1. The cylindric-leaved, cape Mesembryanthemum. 2. The tripolium-leaved, silvery-flowered Mesembryanthemum. 3. The five-leaved, procumbent, scarlet-flowered Mesembryanthemum. 4. The yellow-flowered, conjugate, linguiform-leaved Mesembryanthemum. 5. The smooth, arcuated-leaved Mesembryanthemum. 6. The cord-leaved Mesembryanthemum. 7. The purple, triangular, acute-leaved Mesembryanthemum. 8. The long, triquetrous-leaved, yellow-flowered Mesembryanthemum. 9. The thick and scarlet Mesembryanthemum.

MESPILUS.

THE calyx is a permanent perianthium, formed of a single leaf, concavo-patent, and divided into five segments: the corolla consists of five roundish, hollow petals, inserted into the calyx: the stamina are twenty subulated filaments, inserted into the calyx; the antheræ are simple; the germen stands under the receptacle: the styles are five, simple and erect; the stigmata are capitated: the fruit is a globose, umbilicated berry, crowned with a connivent cup, but with the umbilicus almost perforated: the seeds are five; they are osseous and gibbous.

1. *Mespilus foliis lanceolatis integerrimis subtus tomentosis, calycibus acuminatis.* **The Common Medlar.**

The lanceolated, undivided-leaved Mespilus, with acuminated cups.

The root is large and brachiated; the tree grows to no great height, but is ramose; the leaves are oblong, pointed at the ends, somewhat hairy on the upper surface, and more so underneath: the flowers stand singly; they are large and white: the fruit is large, and of a brown colour.

It is a native of Germany, and is common in our gardens. C. Bauhine calls it, Mespilus Germanica folio laurino, non serrato, sive Mespilus vulgaris.

The other species of this genus are, 1. The laciniated-leaved Mespilus. 2. The pear-

pear-leaved Virginian Meſpilus. 3. The almond-leaved, prickly Meſpilus. 4. The trilobate-leaved Meſpilus. 5. The rounder-leaved Meſpilus.

PYRUS.

THE calyx is a permanent perianthium, compoſed of a ſingle leaf, hollow, and divided into five patent ſegments: the corolla conſiſts of five large, roundiſh, hollow petals, inſerted into the calyx: the ſtamina are twenty ſubulated filaments, inſerted into the calyx, and ſhorter than the corolla: the antheræ are ſimple; the germen ſtands under the receptacle; the ſtyles are five, filiform, and of the length of the ſtamina; the ſtigmata are ſimple; the fruit is an umbilicated apple of a figure, approaching to round, fleſhy, and containing five cells, formed by membranes: the ſeeds are oblong, obtuſe, acuminated at the baſe, convex on one ſide, and plane on the other.

This genus comprehends the Pyrus, the Malus, and the Cydonia of authors: all the kinds of pear, the apple, and the quince. It is wonderful, that authors have not attended to the perfect ſimilarity of the characters in all theſe. They have, for want of a due preciſion, raiſed varieties into ſpecies, and ſpecies into genera.

1. *Pyrus foliis ſerratis, pomis baſi productis.* **The Pear-tree.**
The Pyrus, with ſerrated leaves, and lengthened fruit.

The root is long and thick; the trunk large; the tree conſiderably high, and it's branches naturally erect: the leaves are placed alternately; they are roundiſh, or ſomewhat oblong, thick, and have long pedicles: the flowers are large and white; the fruit is naturally roundiſh, but lengthened at the baſe.

It is a native of Germany; our gardens afford infinite varieties of it from culture. Authors call it, Pyrus ſativa Bergamotta, and Bona Chriſtiana.

2. *Pyrus foliis ſerratis, pomis baſi concavis.* **The Apple-tree.**
The ſerrated-leaved Pyrus, with fruit hollowed at the baſe.

The root is ſpreading; the trunk thick; the tree low, and the branches uſually horizontal or oblique: the leaves are large, roundiſh, but pointed at the end, ſerrated and whitiſh underneath: the flowers are large and white, or reddiſh: the fruit roundiſh, and not lengthened, but hollowed, at the baſe.

It is a native of all Europe; we have infinite variety of the fruit in our gardens, owing ſolely to culture. The crab is the origin of all.

3. *Pyrus foliis integerrimis ſubrotundis ſubtus incanis.* **The Quince-tree.**
The Pyrus, with roundiſh, undivided leaves, hoary underneath.

The root is divided and ſpreading; the tree is low, and the bark browniſh; the leaves are large, roundiſh, of a deep green, often covered with a downy, looſe matter entirely, always hoary underneath: the flowers ſtand ſingly, and are large, beautiful, and of a pale fleſh colour: the fruit is large, lengthened at the baſe, and coronated with a long cup at the ſummit.

It is a native of Germany. All the botanical writers call it, Malus Cydonia and Cotonea. The authors, who have wrote on gardening, have made an almoſt infinite number of imaginary ſpecies, from the varieties of theſe three; but it is not the buſineſs of botanical writers to meddle with them.

SPIRÆA.

THE calyx is a permanent perianthium, formed of a ſingle leaf, plane at the baſe, and lightly divided into five acute ſegments: the corolla conſiſts of five roundiſh, plane petals, inſerted into the calyx; the ſtamina are twenty ſubulated filaments, inſerted into the calyx, and ſhorter than the corolla: the antheræ are roundiſh; the germina

germina are five, oval and ſlender; the ſtyles are five, filiform, and of the length of the ſtamina; the ſtigmata are capitated: the fruit conſiſts of five oblong, compreſſed, acuminated capſules, each formed of two valves: the ſeeds are few, acuminated and ſmall. There is a ſpecies with but three ſtyles.

1. *Spiræa foliis obtuſis lanceolatis ſerratis, floribus duplicato-racemoſis.* Spiræa.
The duplicato-racemoſe flowered Spiræa, with obtuſe, lanceolated, ſerrated leaves.

The root is branched and ſpreading; the ſhrub riſes to four feet high; the branches are ſlender and reddiſh: the leaves ſtand irregularly; they are long, narrow, obtuſe, and ſerrated round the edges: the flowers are ſmall, and of a pale red; they ſtand in a kind of thick ſpikes, of four inches long.

It is a native of Siberia and Tartary; it is common in our gardens. C. Bauhine calls it, Frutex ſpicatus foliis ſalignis ſerratis.

2. *Spiræa foliis integerrimis, umbellis ſeſſilibus.* White ſhrubby Hypericum.
The undivided-leaved Spiræa, with ſeſſile umbels.

The root is ſmall, but branched; the ſhrub grows to three feet high; the branches are ſlender and tough; the bark of a deep brown: the leaves ſtand *cloſely* and irregularly; they are ſmall, and of a dark green: the flowers are of a beautiful white, and ſtand in a kind of little umbels, at the extremities of the branches on ſimple pedicles.

It is a native of America, but is common in our gardens. C. Bauhine calls it, Pruno ſylveſtri affinis Canadenſis. Jonquet, Hypericum fruteſcens Americanum flore albo.

The other ſpecies of Spiræa are, 1. The broader-leaved Spiræa. 2. The crenated-leaved, umbellated Spiræa.

FILIPENDULA.

THE calyx is a ſmall, deciduous perianthium, formed of a ſingle leaf, divided into five reflexo-patent ſegments: the corolla conſiſts of five, or more, petals, inſerted into the calyx, oblong, obtuſe, plane, and patent: the ſtamina are a number of capillary filaments, inſerted into the calyx, and ſhorter than the corolla; the antheræ are ſimple: the germina are acuminated; they are uſually five, ſometimes more, and they terminate in ſo many ſhort ſtyles; the ſtigmata are capitated; there is no pericarpium, except the cruſts of the ſeeds: the receptacle is globoſe; the ſeeds are oblong, acuminated, and diſpoſed in a circular manner.

This genus comprehends the Filipendula and the Ulmaria of authors.

1. *Filipendula foliis pinnatis, foliolis uniformibus.* Dropwort.
The pinnated-leaved Filipendula, with uniform foliola.

The root is compoſed of a multitude of thick fibres, with large, roundiſh, or oval, tuberoſities adhering to them; in many parts black on the ſurface, and white within: the leaves are long, pinnated, and ſerrated about the edges: the pinnæ are ſmall, of a figure approaching to oval, and uniform: the ſtalk is uſually ſingle, ſtriated, hollow, erect, and ramoſe: the leaves are placed alternately; the flowers ſtand in a kind of umbels at the top of the branches; they are ſmall, ſweet-ſcented, white, and full of yellow antheræ.

It is a native of England; it grows in damp places. C. Bauhine calls it, Filipendula vulgaris.

SPIRÆA.

2. *Fili-*

2. *Filipendula foliis pinnatis, folio impari trifido.*
The Filipendula, with pinnated leaves, and the odd leaf trifid. **Meadow Sweet.**

The root is compoſed of a great number of thick, reddiſh fibres; the leaves are pinnated; the pinnæ broad, ſerrated, and ſcabrous, of a deep green on the upper ſurface, white underneath, and the leaf of which terminates the ſtalk or rib larger than the reſt, and trifid: the ſtalks are erect, rigid, ſtriated, and hollow: the flowers ſtand at their tops in a kind of umbels; they are white and ſweet-ſcented.

The plant is common about waters. Authors have called it, Barba capræ and Ulmaria. C. Bauhine, Barba capræ floribus compactis.

The other ſpecies are, 1. The laciniated-leaved Filipendula. 2. The ternate-leaved Filipendula.

Claſs the Twelfth. Order the Sixth.

ICOSANDRIA POLYGYNIA.

Plants which have monophyllous, hollow cups, with the corollæ affixed by their ungues to their ſides, and have about twenty ſtamina inſerted into the corolla, or into the cup, and numerous ſtyles.

ROSA.

THE calyx is a perianthium compoſed of a ſingle leaf, divided into five long, narrow, lanceolated ſegments, two of which alternately are appendiculated on each ſide, two others alternately naked, and the fifth appendiculated only on one ſide: the baſe is campanulato-globoſe: the corolla conſiſts of five obverſely cordated petals, of the length of the cup, and inſerted into the calyx; the ſtamina are very numerous, and very ſhort, capillary filaments, inſerted into the neck of the calyx; the antheræ are trigonal; the germina are numerous, and placed in the bottom of the cup; the ſtyles are of the ſame number; they are ſhort, villoſe, and cloſely compreſſed againſt the neck of the calyx, and inſerted into the ſides of the germina; the ſtigmata are ſimple: the fruit is formed of the fleſhy baſe of the cup; it is of a turbinated figure, coloured, ſoft, containing only one cell, drawn together at the neck, and coronated with ſome irregular laciniæ: the ſeeds are numerous, oblong, and hairy. The peculiar formation of the calyx is more conſtant and certain in the wild, than in the cultivated, kinds.

1. *Roſa caule aculeato, petiolis inermibus, calycibus ſemipinnatis.*
The prickly-ſtemmed Roſe, with unarmed pedicles to the leaves, and ſemipinnate cups. **The Wild Briar.**

The root is divaricated and ſpreading; the ſtem is three quarters of an inch in diameter, and grows to eight or ten feet high, but requires ſupport: the leaves are beautifully pinnated; the pinnules oval and ſerrated; the flowers are ſingle and large, of a white or pale red colour: the fruit is the common hip.

It is wild in our hedges, Authors call it, Roſa ſylveſtris and Roſa canina. All the variety of beautiful roſes in our gardens are varieties of this ſpecies, principally owing to culture; the red, the damaſk, the yellow, the monthly, the variegated, the white Roſe, the briar, and the like, are all produced from this original ſpecies. The flowers of the damaſk Roſe are purgative, thoſe of the red Roſe aſtringent, and the fruit of the wild Roſe pectoral. Preparations of them all are uſed in the ſhops.

2. *Rosa caule petiolisque aculeatis, calycibus indivisis.*
The Rose, with the stem and petioles both prickly, and with undivided cups. **The Burnet Rose.**

The root is divaricated. The trunk is robust, but low, very much branched, and very prickly. The leaves are pinnated; the pinnules are small, roundish, and of a dark green colour. The flowers are small and white; the fruit round.

It is a native of England. C. Bauhine calls it, Rosa sylvestris pomifera minor; J. Bauhine, Rosa pumila spinosissima foliis pimpinellæ glabris.

The other genuine species of Rose are, 1. The prickly-fruited, wild Rose. 2. The great, apple Rose. 3. The large-leaved Rose. 4. The smooth Rose.

RUBUS.

THE calyx is a permanent perianthium, formed of a single leaf, divided into five oblong, lanceolated, patent segments: the corolla consists of five roundish petals, of the length of the cup, erecto-patent, and inserted into the cup: the stamina are numerous filaments, inserted into the cup, and shorter than the corolla: the antheræ are roundish and compressed; the germina are numerous; the styles are capillary and small, and arise from the sides of the germina: the stigmata are simple and permanent: the fruit is a compound berry; the acini it is composed of are roundish, and arranged into a cluster, convex, concave below, and each acinus has only one cell: the seeds are single and oblong; the receptacle of the pericarpia is conic: the acini in most of the species grow together, so as to be inseparable without breaking.

1. *Rubus foliis quinato-digitatis ternatisque, caule petiolisque aculeatis.*
The quinato-digitated and ternated-leaved Rubus, with the stem and petioles prickly. **Common Bramble.**

The root is oblong, nodose, and creeping. The stem is angulated, spinose, six feet long, but too weak to stand erect. The leaves stand three or five on a pedicle; when five, they are not pinnated, but digitated; they are large, oblong, broad, scabrous, and whitish underneath. The flowers are large and white, or flesh-coloured; the fruit black, when ripe.

It is common in hedges throughout Europe. C. Bauhine and others call it, Rubus vulgaris, and Rubus fructu nigro.

2. *Rubus foliis quinato-pinnatis ternatisque, caule hispido.*
The hispid-stalked Rubus, with ternate and pinnated-quinate leaves. **The Raspberry Bush.**

The root is divaricated and spreading. The stem is round, slender, hispid, rather than prickly, especially while young, and of a reddish colour. The leaves are large, oblong, and hairy; they stand three or five on a pedicle, and, when five, they are not digitated, as in the Bramble, but pinnated: the pedicles are about two inches long, and smooth. The flowers are white; the fruit red, tender, and succulent.

It is a native of most parts of Europe. C. Bauhine calls it, Rubus Idæus spinosus; others, Rubus Idæus.

It's fruit is cooling and subacid; an agreeable syrup is made of it's juice.

The other species of Rubus are, 1. The small, ternate-leaved, blue-fruited Rubus. 2. The herbaceous-stalked Rubus, called the Stone Bramble, and Chamærubus. 3. The ternate-leaved Rubus, with only one flower on the stalk. 4. The simple-leaved Rubus, with only one flower on the stalk, called the Chamæmorus. 5. The hoary Rubus.

FRAGARIA.

THE calyx is a plane perianthium, compoſed of a ſingle leaf, lightly divided into ten ſegments, alternately exterior and narrow: the corolla conſiſts of five roundiſh, patent petals, inſerted into the calyx: the ſtamina are twenty ſubulated filaments, ſhorter than the corolla, and inſerted into the calyx: the antheræ are lunular; the germina are numerous, very ſmall, and collected into a head: the ſtyles are ſimple, and inſerted into the ſides of the germina: the ſtigmata are ſimple: there is properly no pericarpium: the common receptacle of the ſeed is of a roundiſh, oval figure, plane at the baſe, and pulpoſe, large, ſoft, and deciduous: the ſeeds are numerous, very ſmall, acuminated, ſcattered over the ſuperficies of the receptacle, and not deciduous.

Fragaria flagellis reptans. **The Strawberry Plant.**
The Fragaria, with creeping tendrils.

The root is long, reddiſh, and fibrated. The tendrils, or flagellæ, are round, knotty, and ſmooth; they run every way from the head of the root, and themſelves take root at the joints. The leaves are large, oblong, broad, ſerrated, and whitiſh underneath; they ſtand three on each pedicle; the pedicles are four or five inches long. The ſtalk is round, hairy, and ſhort, ramoſe at the top, and furniſhed with ſix or eight large, white flowers. The fruit is red, ſweet, and large.

It is a native of our woods. C. Bauhine calls it, Fragaria vulgaris. Culture alters it ſo much, as to have given riſe, by the varieties, to ſeveral imaginary ſpecies. The fruit is alſo very ſubject to variation; on the wild plant it is, in ſome places, very large, in ſome white, in ſome irregularly figured.

The other really diſtinct ſpecies are, 1. The ſcarlet, Virginian Fragaria. 2. The arboreſcent Fragaria, with green flowers. 3. The broader-leaved, deeply-ſerrated Fragaria, without tendrils.

POTENTILLA.

THE calyx is a perianthium, formed of a ſingle leaf, plane, lightly divided into ten ſegments, alternately ſmaller, and reflex: the corolla conſiſts of five roundiſh, patent petals, inſerted by their ungues into the calyx: the ſtamina are twenty ſubulated filaments, ſhorter than the corolla, and inſerted into the calyx: the antheræ are oblong and lunulated: the germina are numerous, very ſmall, and collected into a head: the ſtyles are filiform, of the length of the ſtamina, and inſerted into the ſides of the germina: the ſtigmata are obtuſe: there is no pericarpium: the receptacle of the ſeeds is roundiſh, ſmall, and permanent, and is covered by the cup, and ſurrounded with the ſeeds, which are numerous and acuminated.

This genus comprehends the Quinquefolium and the Pentaphylloides of Tournefort, &c.

1. *Potentilla foliis pinnatis, caule repente.* **Silver-Weed, or Wild Tanſey.**
The pinnated-leaved Potentilla, with a creeping ſtalk.

The root is ſhort, reddiſh, and furniſhed with a multitude of fibres. The ſtalks are procumbent, and take root at their knots, or joints. The leaves are long, pinnated, and of a pale green colour on the upper ſide, and a ſilvery-white underneath; they are compoſed of about eight pairs of pinnæ, which are oblong, narrow, and ſerrated at the edges. The flowers ſtand on ſhort pedicles, and are of a beautiful yellow colour, and large.

It is common by way-ſides. C. Bauhine calls it, Potentilla; others, Argentina and Pentaphylloides ælatrum.

2. *Potentilla foliis digitatis, caule repente, pedunculis unifloris.*

Common Cinquefoil.

The Potentilla, with digitated leaves, creeping ſtalks, and ſingle flowers.

The root is oblong, thick, and woody. The ſtalks are round, ſlender, and procumbent; they take root at their joints, and ſpread every way to two or three feet in length. The leaves ſtand five, or more, on each pedicle; they are of a duſky green colour, oblong, and ſerrated at the edges. The flowers ſtand ſingly, on long pedicles, and are large and yellow.

It is common by way-ſides. C. Bauhine calls it, Quinquefolium majus repens; others, Quinquefolium vulgare. It's root is aſtringent.

The other ſpecies are, 1. The ſhrubby Potentilla. 2. The ſilver-leaved, erect Potentilla. 3. The little, gold-yellow-flowered, Alpine Potentilla. 4. The ternate-leaved, erect, hairy Potentilla. 5. The white-flowered Potentilla, with leaves cut in at the ends. 6. The ſmaller-leaved, white Potentilla. 7. The woolly Potentilla. 8. The low, Canada Potentilla. 9. The ſtrawberry Cinquefoil. 10. The procumbent, ſhort-leaved Potentilla. 11. The ternate-leaved, ramoſe Potentilla.

TORMENTILLA.

THE calyx is a plane perianthium, compoſed of a ſingle leaf, lightly divided into eight acute ſegments, alternately ſmaller: the corolla conſiſts of four obverſely cordated, plane petals, inſerted by their ungues into the calyx: the ſtamina are ſixteen ſubulated filaments, of half the length of the corolla, and inſerted into the calyx: the antheræ are ſimple; the germina are eight; they are ſmall, and form a kind of head: the ſtyles are of the length of the ſtamina; they are inſerted into the ſides of the germina, and the ſtigmata are obtuſe: the receptacle of the ſeeds is very ſmall; it is covered with ſeeds, and ſurrounded by the cup: the ſeeds are eight, oblong, and acuminated obtuſely.

Linnæus has, in his late writings, joined this genus with the Potentilla. The difference is principally in the number of the parts, but it is ſufficient.

There is only one ſpecies of it.

TORMENTILLA.

The root is tuberous, and furniſhed with a number of fibres. The ſtalks are ſlender, hairy, reddiſh, round, a foot long, and ſcarce able to ſupport themſelves erect. The leaves are oblong, narrow, and ſerrated, and ſtand ſeven together, at every joint of the ſtalk. The flowers are ſmall, but of a beautiful yellow colour.

It is common on heaths. C. Bauhine calls it, Tormentilla ſylveſtris; others, Tormentilla vulgaris. It's root is a very good aſtringent.

COMARUM.

THE calyx is a large, coloured, permanent perianthium, compoſed of a ſingle leaf, lightly divided into ten patent ſegments, alternately ſmaller, and inferior: the corolla conſiſts of five oblong, acuminated petals, ſcarce a third part ſo large as the calyx, into which they are inſerted: the ſtamina are twenty ſubulated filaments, inſerted into the cup, of the length of the corolla, and permanent: the antheræ are lunular and deciduous: the germina are numerous, roundiſh, and very ſmall; they are collected into a head: the ſtyles are ſimple, ſhort, and inſerted into the ſides of the germina: the ſtigmata are ſimple: there is no pericarpium: the common receptacle of the ſeeds is of the figure of a ſcrotum, very large, fleſhy, and permanent: the ſeeds are numerous, acuminated, and they cover the receptacle.

Of this genus there is only one known ſpecies.

COMARUM.

The root is long, creeping, and blackiſh. The leaves are pinnated; there are uſually five or ſeven of the pinnæ on the ſame pedicle, arranged in pairs, with an odd one at the extremity; they are oblong, broad, ſerrated, and of a pale bluiſh-green colour. The ſtalks are round, ſmooth, in part procumbent, but often riſing a foot and a half, or more, erect; the leaves ſtand alternately on them. At the tops of the branches ſtand the flowers, which are purple, as is alſo the inſide of the calyx.

It is a native of the north of England. C. Bauhine calls it, Quinquefolium paluſtre rubrum; others, Pentaphyllum flore rubro.

GEUM.

THE calyx is a perianthium, compoſed of a ſingle leaf, divided into ten ſomewhat erect ſegments, alternately very ſmall and acute: the corolla conſiſts of five petals, of a roundiſh figure, with narrow ungues, of the length of the calyx, and inſerted into it: the ſtamina are numerous, ſubulated filaments, of the length of the cup, and inſerted into it: the antheræ are ſhort, broad, and obtuſe: the germina are numerous, and are collected into a head: the ſtyles are long, thready, and inſerted into the ſides of the germina: the ſtigmata are ſimple: there is no pericarpium: the common receptacle of the ſeeds is oblong, hairy, and placed on the cup, which is, at that time, reflex: the ſeeds are numerous, compreſſed, hiſpid, and each furniſhed with a long, geniculated ſtyle.

This genus comprehends the Caryophyllata of Tournefort and others.

1. *Geum floribus erectis, fructu globoſo, ſeminum cauda uncinata nuda.* **Common Avens.**

The erect-flowered Geum, with a globoſe fruit, and the tails of the ſeeds naked and uncinated.

The root is ſhort, thick, tuberous, oblique, and furniſhed with fibres, of a reddiſh colour within, and of an aromatic ſmell. The leaves are pinnated and large; the pinnæ roundiſh, and the odd leaf, at the end, much largeſt, and divided into three ſegments: the ſtalk is erect, ſlender, a foot, or more, high: the leaves ſtand alternately on it. The flowers ſtand at the tops of the branches; they are erect, yellow, and moderately large. The fruit is a roundiſh, erect, hairy body, of the bigneſs of a ſmall nut.

It is common by way-ſides. C. Bauhine calls it, Caryophyllata vulgaris; Geſner, Geum urbanum.

2. *Geum floribus nutantibus, fructu oblongo, ſeminum cauda molli plumoſa.* **Purple marſh Avens.**

The nutant-flowered Geum, with oblong fruit, and plumoſe tails to the ſeeds.

The root is oblong and creeping. The leaves are pinnated, of a dark green colour, and ſomewhat hairy; the pinnæ are roundiſh, the terminatory leaf broad, and divided into three lobes. The ſtalks are numerous, round, hairy, and often reddiſh, a foot, or more, in height; the flowers ſtand alternately on them; they are placed on ſhort, reddiſh, hairy, bending pedicles; they are of a purple colour on the outſide, and of a pale red within, ſcarce appearing beyond the edge of the cup, and always hanging down. The fruit is oblong, and the tails of the ſeeds are beautifully plumoſe.

It is a native of the north of England. C. Bauhine calls it, Carophyllata aquatica nutante flore; Geſner, Geum rivale.

The other ſpecies are, 1, The ground ivy-leaved Geum. 2. The white-flowered, large-leaved, Virginian Geum. 3. The little, nutant-flowered Geum. 4. The great, yellow-flowered, Alpine Geum. 5. The divided-leaved, Alpine Geum. 6. The digitated-leaved, Alpine Geum.

DRYAS.

THE calyx is a perianthium, formed of a ſingle leaf, divided into eight patent, linear, obtuſe ſegments, equal in ſize, and a little ſhorter than the corolla: the corolla conſiſts of eight oblong, emarginated, patent petals, inſerted into the calyx: the ſtamina are numerous, ſhort, capillary filaments, inſerted into the calyx: the antheræ are ſmall: the germina are ſmall, numerous, and formed into a cluſter: the ſtyles are capillary, and inſerted into their ſides: the ſtigmata are ſimple: there is no pericarpium: the ſeeds are numerous, roundiſh, compreſſed, and furniſhed with extremely long and lanigerous ſtyles.

The only known ſpecies of this genus has been confounded by moſt authors with the Caryophyllatæ.

DRYAS.

The root is long, thick, woody, creeping, and of a reddiſh-black colour. The ſtalks are round, woody, diffuſe, and procumbent; they grow to ſix or eight inches long; they are reddiſh. The leaves ſtand alternately, and are ſimple, oblong, ſerrated, rugoſe, and hoary underneath; they are of a duſky green colour on the ſurface. The flowers are large and white; they ſtand ſingly on long, hairy pedicles.

It is a native of Sweden and Lapland. C. Bauhine calls it, Chamædrys Alpina ciſti flore; Ray, Caryophyllata Alpina chamædryos folio.

Claſs the Thirteenth.

POLYANDRIA.

Plants which have in every flower very numerous ſtamina.

OF the Polyandria ſome have only one ſtyle, ſome have two, ſome three, ſome four, ſome five, ſome ſix, and, finally, ſome very numerous, ſtyles. The genera of this claſs will, therefore, be arranged, according to this diſtinction, into ſeven orders.

Order the Firſt.

POLYANDRIA MONOGYNIA.

Plants which have numerous ſtamina and only a ſingle ſtyle in the flower.

OF theſe ſome have the ſtyle ſcarce viſible, others have it very long: the genera of each kind are numerous, and it will be convenient to arrange them in two diviſions, according to this obvious diſtinction.

Claſs the Thirteenth. Order the Firſt.

Diviſion the Firſt.

Polyandria Monogynia, with the ſtyle ſcarce viſible.

MARCGRAVIA.

THE calyx is a perianthium, compoſed of ſix ſquammæ, diſpoſed in pairs oppoſitely, and the inferior ones the ſmaller: the corolla conſiſts of a ſingle petal; it is of a conico-oval figure, and entire, and is every-where ſhut, and ſeparates from the parts of fructification at it's baſe: the ſtamina are numerous, ſhort, ſubulated filaments, deciduous, as the corolla, and patent: the antheræ are large, of an oblong oval figure, and erect: the germen is oval; there is no ſtyle; the ſtigma is obſolete: the fruit is a globoſe berry, with a ſingle cell: the ſeeds are numerous, nidulant, and very ſmall.

The

The flowers in this genus form a kind of umbel, and, in the midſt of it, there ſtand certain large ſeſſile bodies, of a ſtrange figure; they are formed each of a ſingle leaf, and are clavated, ringent, hollow in their lower part, and open at the baſe; they have ten acute, prominent labia before, and much reſemble the upper part of the aconite flower; theſe have uſually been called flowers, but they are not ſo; they are only excretory veſſels, or glands.

MORISONA.

THE calyx is a fading perianthium, formed of a ſingle leaf, ventricoſe, lightly divided into two parts, patent at the mouth, dentated at the neck, and obtuſe: the corolla conſiſts of four oblong, obtuſe petals, patent beyond the cup: the ſtamina are numerous filaments: the antheræ are ſimple: the germen is oval; the ſtyle is ſimple; the ſtigma is capitated, and plano-convex: the fruit is a globoſe berry, with a hard, ſmooth rind, ſupported on the ſtyle, and containing only one cell: the ſeeds are numerous, reniform, and nidulant.

It is an American, deſcribed by Plumier, 23.

BREYNIA.

THE calyx is a very ſmall perianthium, compoſed of a ſingle leaf, deciduous, and divided into four oval, coriaceous, patent ſegments: the corolla conſiſts of four oval, patent petals, and is ſomewhat larger than the cup: the ſtamina are very numerous, capillary filaments, longer than the corolla: the antheræ are erect and oblong: the germen is very long, very ſlender, clavated, and obtuſe: the ſtyle is ſcarce viſible; the ſtigma is obtuſe: the fruit is a very long, fleſhy, clavated, ſoft pod, formed of two valves, and containing only one cell: the ſeeds are numerous, kidney-ſhaped, fleſhy, and arranged longitudinally in the pod.

It is an American, deſcribed by Plumier, 16.

CRATÆVA.

THE calyx is a deciduous perianthium, formed of a ſingle leaf, plane at the baſe, and lightly divided into four patent, oval ſegments: the corolla conſiſts of four oval petals, bent upwards toward the ſame ſide, and furniſhed with narrow ungues, of the length of the cup: the ſtamina are about ſixteen ſetaceous filaments, ſhorter than the corolla, and placed in a declinatory poſture, oppoſite to the petals: the antheræ are erect and oblong: the germen is of an oval figure, and is ſupported on a very long filament: the ſtigma is ſeſſile and capitated: the fruit is a very large, globoſe, fleſhy berry, containing one cell, and ſtanding on a thick ſtylus: the ſeeds are numerous, roundiſh, emarginated. and nidulatory.

This genus comprehends the Tapia of Plumier.

CAPPARIS.

THE calyx is a perianthium, compoſed of four oval, hollow, and gibbous leaves: the corolla conſiſts of four very large, patent, roundiſh, emarginated petals: the ſtamina are numerous, filiform capillaments, of the length of the corolla: the antheræ are ſimple; the germen is oval, and is ſupported on a ſtylus of the length of the ſtamina: the ſtigma is obtuſe and ſeſſile: the fruit is a fleſhy, turbinated capſule, with a ſingle cell: the ſeeds are numerous, kidney-ſhaped, and nidulatory.

1. *Capparis caudice ſpinoſo, foliis ſubrotundis.* The Capers Shrub.
The roundiſh-leaved, prickly Capparis.

The root is long, divaricated, and ſpreading; the ſtems are numerous, three quarters of an inch thick, or more, and armed with ſharp, robuſt, and crooked ſpines, like thoſe of the bramble. The leaves ſtand alternately, and are of a roundiſh figure, ſometimes oblong and pointed; they are about two inches broad. The flowers ſtand ſingly,

singly, on moderately long pedicles, arising from the alæ of the leaves; they are large, white, and beautiful.

It is a native of Italy. C. Bauhine calls it, Capparis spinosa, fructu minore, folio rotundo; others, only Capparis. The buds make the pickled Capers, used in our sauces.

The other species are, 1. The acute-leaved Capparis, with double spines. 2. The large-fruited Capparis, without spines. 3. The bay-leaved, arborescent Capparis of America.

CAMBOGIA.

THE calyx is composed of four leaves; the corolla consists of four petals; the fruit is an apple, containing eight cells.

1. *Cambogia fructu sulcato.*
The Cambogia, with a sulcated fruit.

The root is very large, divaricated, and spreading; the tree very large, tall, and ramose; it's trunk often three feet in diameter. The leaves stand in pairs, and have short pedicles; they are thick, firm, and of an ovato-lanceolate figure. The flowers stand in clusters, at the extremities of the branches; they have short pedicles, and are of a pale red, sometimes of a yellow, colour. The fruit is of the bigness of an orange, roundish, but marked deeply with eight or nine furrows, with high ridges between them; it has a little kind of head at it's top, and is, at first, green, afterwards yellow, and, when ripe, white.

It is a native of the East Indies. Acosta calls it, Carea pulli; Van Rheede, Caddam pulli; Hermans, Ghoraka.

2. *Cambogia fructu glabro.*
The smooth-fruited Cambogia.

The root is large and spreading; the tree grows to sixty feet high. The leaves stand in pairs, and are of a lanceolated figure. The flowers stand on short pedicles, in little clusters, at the tops of the branches. The fruit is of the bigness of a nutmeg, and is of a reddish-yellow, when ripe, which is also the colour of the flowers.

It is a native of Ceylon and Malabar. Herman calls it, Kanna ghoraka.

Both these trees, on wounding their bark, afford the Gambogium of the shops, a violent cathartic.

ACTÆA.

THE calyx is a spathaceous perianthium, composed of four roundish, obtuse, hollow, deciduous leaves: the corolla consists of four deciduous petals, larger than the calyx, and of a quadrangulari-acuminated figure at each end: the stamina are about thirty capillary filaments, broadest at the top: the antheræ are roundish, didymous, and erect: the germen is oval; there is no style: the stigma is thick, and obliquely depressed: the fruit is a smooth, unilocular berry, of a figure approaching to oval, and with one furrow: the seeds are numerous, semicircular, truncated, and arranged in a double series.

This genus comprehends the Christophoriana of authors; there is but one known species of it.

ACTÆA.

The root is oblong, thick, black without, yellowish within, and furnished with numerous fibres. The stalk is round, slender, striated, jointed, and about two feet high. The leaves are large; they stand in a ternate order, on pedicles, which divide again into three parts, and, finally, the leaves are sometimes so divided as to seem each composed of three others; they are oblong, of a deep green colour, serrated at the edges, and the terminatory leaf is usually divided at least into three lobes: the flowers are small, white, and stand in clusters: the berries are small and black.

It is a native of most parts of Europe, in woods. C. Bauhine calls it, Aconitum racemosum; other authors, in general, Christophoriana. It varies in the colour of the berries; they are sometimes white, sometimes reddish; it is esteemed poisonous.

BOCCONIA.

THE calyx is a deciduous, oval, obtuſe, hollow ſpatha, compoſed of two leaves: the corolla conſiſts of four very narrow petals: the ſtamina are uſually twelve very ſhort filaments: the antheræ are erect, and of the length of the cup: the germen is large, roundiſh, and contracted on each ſide: the ſtyle is ſimple, and ſlightly bifid: the ſtigmata are ſimple; the fruit is of an oval figure, but contracted on each ſide, long, compreſſed, containing only one cell, and filled with pulp: the ſeed is ſingle and globoſe.

It is an American, deſcribed by Plumier, 25.

MUNTINGIA.

THE calyx is a perianthium, formed of a ſingle leaf, hollowed at the baſe, and divided into five large, permanent, and lanceolato-acute ſegments: the corolla conſiſts of five roundiſh petals, of the length of the cup; they are patent, and are inſerted into the cup: the ſtamina are numerous, capillary, and very ſhort filaments: the antheræ are ſimple; the germen is globoſe and hairy; there is no ſtyle; the ſtigma is capitated and pentagonal: the fruit is a round, unilocular berry, umbilicated with the ſtigma: the ſeeds are numerous, roundiſh, and ſmall.

It is an American, deſcribed by Plumier, 6.

CHELIDONIUM.

THE calyx is a roundiſh ſpatha, compoſed of two oval, concave, obtuſe, deciduous leaves: the corolla conſiſts of four roundiſh, plane, patent petals, large, and narrow at the baſe: the ſtamina are numerous, plane filaments, about thirty, broadeſt at the top, and ſhorter than the corolla: the antheræ are oblong, compreſſed, erect, obtuſe, and didymous: the germen is cylindric, and of the length of the ſtamina: there is no ſtyle; the ſtigma is capitated and bifid: the fruit is a cylindric pod, formed of two valves, and containing only one cell: the ſeeds are numerous, oval, and ſmooth: the receptacle is linear between the valves, in form of a ſuture, and not opening.

This genus comprehends the Chelidonium and the Glaucium of Tournefort.

Chelidonium glabrum pedunculis uniſloris. **Yellow, horned Poppy.**
The ſmooth Chelidonium, with flowers, one on a peduncle.

The root is long, robuſt, and white. The plant grows to two feet high, and is robuſt and branched. The ſtalks are round, of a pale greyiſh-green colour; the leaves are large, laciniated at their edges, and of a bluiſh-green. The flowers ſtand on ſingle pedicles, at the tops of the ſtalks; they are very large, and of a beautiful yellow colour.

It is a native of our ſea-coaſts. Tournefort calls it, Glaucium flore luteo.

The other ſpecies are, 1. The rough-leaved, purple-flowered Celandine; this is alſo called a horned Poppy. 2. The great Celandine, with the leaves finely divided. 3. The common, great Chelidonium.

PAPAVER.

THE calyx is an oval, emarginated ſpatha, compoſed of two oval, hollow, deciduous leaves: the corolla conſiſts of four large, roundiſh, plane, patent petals, narroweſt at the baſe, and alternately ſmaller: the ſtamina are numerous, capillary filaments, much ſhorter than the corolla: the antheræ are compreſſed, oblong, erect, and obtuſe: the germen is roundiſh and large: there is no ſtyle; the ſtigma is peltated, plane, and radiated: the fruit is a capſule, containing one cell, coronated with a large, plane ſtigma, and opening with ſeveral foramina under it: the ſeeds are numerous and very ſmall; the receptacles are longitudinal plicæ, of the ſame number with the rays of the ſtigmata; they grow to the ſides of the fruit, or capſule.

Papaver caule multifloro, foliis ſimplicibus glabris.
The ſimple, ſmooth-leaved Papaver, with many flowers on the ſtalks.

Garden Poppy.

The root is fibrous and white. The plant riſes to four feet high. The ſtalk is robuſt and erect, round, of a greyiſh-green, and ſmooth. The leaves are four or five inches long, two and a half broad, ſmooth, laciniated at their edges, and of a bluiſh-green colour. The flowers ſtand at the tops of the branches, and are very large, of a whitiſh colour, but black toward the bortom. The fruit, which ſucceeds theſe, is the common Poppy-head of the ſhops.

It is a native of moſt parts of Europe, and is cultivated every-where in gardens. C. Bauhine calls it, Papaver hortenſe femine albo; others, Papaver album ſativum.

There are four varieties of this plant deſcribed as ſeparate ſpecies by authors: 1. The black-ſeeded Poppy. 2. The fimbriated, or criſtated, Poppy of C. Bauhine, with the flowers and ſeeds white. 3. The criſtated Poppy, with red flowers and black ſeeds; and, 4. The double-flowered, white Poppy. The old authors have recounted theſe as diſtinct ſpecies: our gardeners have of late multiplied the varieties of the double Poppies to an amazing number, and ſome have alſo added theſe to the number of ſpecies.

The truly diſtinct ſpecies of Papaver, beſide the common one, are, 1. The purple-flowered, horned Poppy, commonly called a Glaucium; of this alſo there are two varieties, called diſtinct ſpecies, the longer and ſhorter headed Argemone. 2. The great-flowered, very hairy, oriental Poppy. 3. The yellow, ſweet-flowered Poppy, with naked ſtalks. 4. The common field Poppy; the varieties of which, with large and with double flowers, have alſo been called diſtinct ſpecies. 5. The hoary-ſeeded Poppy. 6. The ſmaller, many-flowered Poppy. 7. The undivided-leaved, corn Poppy. 8. The yellow Poppy. 9. The coriander-leaved Poppy. 10. The hypecoum-leaved, oriental Poppy.

All the Poppies have a narcotic quality; the opium of the ſhops is the produce of the firſt ſpecies in Turky; with us the ſyrup of diacodium is made of the heads.

ARGEMONE.

THE calyx is a roundiſh ſpatha, compoſed of three hollow, pointed, deciduous leaves: the corolla conſiſts of five roundiſh, erecto-patent petals, larger than the cup: the ſtamina are numerous, filiform, and of the length of the cup: the antheræ are oblong and erect: the germen is oval and pentangular: there is no ſtyle: the ſtigma is thick, obtuſe and reflex, divided into five parts, and permanent: the fruit is an oval, pentangular capſule, containing one cell, and ſeeming as if formed of five valves: the ſeeds are numerous, and very ſmall: the receptacles are linear, and grow to the angles of the pericarpium; they do not burſt.

This genus is nearly allied to the papaver; there is but one known ſpecies of it.

ARGEMONE.

The root is fibrous. The plant grows to a foot high. The ſtalk is round, thick, and prickly. The leaves are oblong, jagged, and prickly at the edges, and of a pale green colour, variegated with lines and ſtreaks of white. The flowers are large and yellow, and grow in the alæ of the leaves.

It is a native of Mexico, and of ſome of the Caribbee iſlands. C. Bauhine calls it, Papaver ſpinoſum; Tournefort, Argemone Mexicana.

SARACENA.

THE Saracena has a double perianthium; the lower is compoſed of three ſmall, oval, deciduous leaves; the upper one of five large, coloured, ſuboval, and deciduous ones: the corolla conſiſts of five petals, of an oval figure, bent, and covering the ſtamina; their ungues are ſtrait and oblong: the ſtamina are very numerous, ſmall filaments: the antheræ are ſimple; the germen is roundiſh; the ſtyle is cylindric, and very ſhort: the ſtigma is permanent; it is clypeated, peltated, pentangular, and covers the ſtamina: the fruit is a roundiſh capſule, with five cells: the ſeeds are numerous, roundiſh, and acuminated.

This

This genus comprehends the Calophyllon of Moriſon, and the Bucanophyllon of Plukenet.

Saracena foliis brevioribus.
The ſhorter-leaved Saracena.

The hollow-leaved Plant.

The root is brown, hard, oblong, and creeping; the leaves are of a ſtrange form, hollow and tumid: they are ten or twelve in number, four or five inches long, an inch in diameter, rounded, but ſomewhat gibboſe, narroweſt at bottom, and toward the top having a cavity there that will admit a man's thumb. At the top there ſtands a kind of lip, broad and patent, hoary underneath, and ſerving as a kind of operculum, being moveable, as it were, on a hinge; the opening of the cavity of the leaf is often covered with this. Theſe leaves ſtand erect; but there are, beſides theſe, a ſet of others, which are flat, roundiſh, two or three inches long, and ſpread round the baſe of theſe on the ground: the ſtalks are naked, and about a foot high; on the top of each ſtands a ſingle flower, which is an inch and a half long, near an inch in diameter, not quite erect, of an odd form, and of a purpliſh colour.

It is a native of many parts of America, in damp places, and about the ſea. C. Bauhine calls it, Limonio congener Cluſii; and moſt of our old writers deſcribe it under the name of the ſtrange, hollow-leaved plant.

The other ſpecies are, 1. The longer-leaved, yellow-flowered Saracena. 2. The ſlender-ſtalked Saracena.

CLUSIA.

THE calyx is a perianthium, compoſed of five roundiſh, hollow, patent, and permanent leaves; the corolla conſiſts of five large, hollow, roundiſh petals: the nectarium is globoſe; it is formed of a ſingle leaf, and includes the germen, but is open at the ſummit, to give paſſage to the ſtigma: the ſtamina are very numerous, ſimple filaments, ſhorter than the corolla: the antheræ are ſimple; the germen is of an ovato-oblong figure; there is ſcarce any ſtyle: the ſtigma is ſtellated, plane, obtuſe, and has ſix dents at the edge: the fruit is an oval capſule, with ſix furrows on it; it is formed of ſix valves, and contains ſix cells; the valves open into a radiated form; the ſeeds are numerous, oval, and covered with a pulp, and fixed to a columnar, angular receptacle.

The number, in regard to the fruit, varies from five to ten; and the ſame proportion is obſerved in the ſtigma, the valves, and the cells.

It is an American, deſcribed by Plumier and by Plukenet, under the name of Cenchrimedea.

MUNTINGIA.

THE calyx is a perianthium, formed of a ſingle leaf, divided into five ſegments, and hollowed at the baſe: the ſegments are large, lanceolato-acuminated, and permanent: the corolla conſiſts of five petals, large, roundiſh, and inſerted into the cup: the ſtamina are numerous, and very ſhort, capillary filaments; the antheræ are ſimple: the germen is globoſe and hairy; there is no ſtyle: the ſtigma is capitated and pentagonal: the fruit is a globoſe berry, containing only one cell, and umbilicated with the ſtigma: the ſeeds are numerous, roundiſh, and very ſmall.

It is a native of South America, and is figured by Plumier.

SANGUINARIA.

THE calyx is a deciduous ſpatha, formed of two leaves, oval, hollow, and ſhorter than the flower: the corolla conſiſts of eight oblong, obtuſe, very patent petals, alternately narrower, and placed interiorly: the ſtamina are numerous, ſimple filaments, ſhorter than the corolla; the antheræ are ſimple: the germen is oblong and compreſſed; there is no ſtyle: the ſtigma is thick, biſulcated by a ſtria of the length of the ſtamina, and permanent: the fruit is an oblong, ventricoſe capſule, formed of

two

two valves, and pointed at each end: the ſeeds are numerous, roundiſh, and acuminated. Dillenius has figured it in his Hortus Elthamenſis.

PODOPHYLLUM.

THE calyx is a ſpatha, emulating the figure of a perianthium; it is large, formed of three valves, of an oval figure, and hollowed, and is concavo-erect and deciduous: the corolla conſiſts of nine hollow, rounded petals, folded or plicated at the rim, and ſmaller than the cup: the ſtamina are about twenty very ſhort filaments; the antheræ are oblong and large; the germen is roundiſh; there is no ſtyle: the ſtigma is obtuſe and plicated: the fruit is a capſule of an oval figure, containing only one cell, and crowned with the ſtigma: the ſeeds are numerous and roundiſh, and the receptacle free.

This genus comprehends the Anapodophyllon of authors. There is but one known ſpecies of it.

PODOPHYLLUM. The May Apple.

The root is white, ſucculent, and tuberculous; the ſtalk riſes ſingle to ſix inches high, and there divides into two parts, of three or four inches long each; on each of theſe ſtands a large, ſingle leaf, of a roundiſh figure, but divided into ſix parts, of the breadth of a man's hand, or more: the flowers ſtand ſingly between the two branches of the ſtalks, on a pedicle of half an inch long; before it is open, it reſembles the fruit of the hip or wild roſe; but, when open, it is large and white: the fruit is at firſt green; and when ripe, reddiſh.

It is a native of Virginia, &c. Tournefort calls it, Anapodophyllum Canadenſe Morini.

NYMPHÆA.

THE calyx is a large, coloured, and permanent perianthium, formed either of five or four leaves: the corolla conſiſts of a number of petals, uſually fifteen; they are ſmaller than the cup, and are inſerted into the ſide of the germen, in more than a ſingle ſeries: the ſtamina are very numerous filaments, often not leſs than twenty; they are ſhort, flatted, and crooked: the antheræ are oblong, and grow to the ſides of the ſtamina: the germen is oval and large; there is no ſtyle: the ſtigma is orbiculated, plane, peltato-ſeſſile, and marked with rays, crenated at the edge, and permanent: the fruit is a rude, oval, fleſhy berry, drawn together at the neck, coronated at the top, and contains ſeveral cells, from ten to fifteen, which are full of pulp: the ſeeds are numerous and roundiſh.

The calyx and corolla in this genus are very uncertain, in regard to number and figure. The Nymphæa of Boerhaave has the petals ſmall, and five roundiſh leaves to the cup: the Leuconymphæa, of the ſame author, has the cup ſcarce larger than the corolla, and conſiſting of four oval leaves; and the Nelumbo of Tournefort has the pericarpium truncated with cells, containing ſingle ſeeds, making their appearance at peculiar apertures in the diſk of the ſtigma. Yet all theſe are properly of the ſame genus.

Nymphæa calyce magno pentaphyllo. Yellow Water Lily.
The Nymphæa, with a large pentaphyllous cup.

The root is long, and as thick as a man's leg; the leaves are affixed to long pedicles, and ſwim on the ſurface of the water; they are ſomewhat longer than broad, and in ſome degree reſemble the flat bottom of a horſe's foot; the flowers are large and yellow, and they ſtand ſingly only on long pedicles, juſt ſhewing themſelves above the ſurface of the water.

The plant is common in our rivers. The botanical writers in general call it, Nymphæa lutea major.

The other ſpecies are, 1. The great, white, water Lily. 2. The dentated-leaved, water Lily. 3. The round-leaved, white Nymphæa. 4. The Nelumbo, or Indian Nymphæa, with red flowers, called, by botanical writers, the Faba Ægyptiaca.

Claſs

Claſs the Thirteenth. Order the Firſt.

Diviſion the Second.

Polyandria Monogynia, with elongated ſtyles.

DELIMA.

THE calyx is a perianthium, compoſed of five oblong leaves; there is no corolla: the ſtamina are numerous, ſhort, and ſlender filaments: the antheræ are tumid and oblong; the germen is oval; the ſtyles moderately long and ſlender; the ſtigma capitated; the fruit is a capſule formed of two valves, and containing only two ſeeds.

There is but one known ſpecies of this genus, which needs no farther deſcription.

SLOANEA.

THE calyx is a perianthium, formed of a ſingle leaf, divided into ſeven ſegments, of a ſemi-lanceolated figure; there is no corolla, but the calyx is ſometimes taken for one: the ſtamina are numerous, ſubulated filaments, broadeſt at top, and of the length of the cup; the antheræ grow to their ſides: the germen is ſituated in the bottom of the cup: the ſtyle is ſubulated, and longer than the ſtamina; the ſtigma is acute: the fruit is a large, roundiſh, echinated capſule, formed of four valves; the ſeeds are oval, obtuſe, fleſhy, and have oblong nuclei.

It is a native of South America, and is figured by Plumier, 15.

XYLON.

THE calyx is a permanent, campanulated perianthium, formed of one leaf, and divided lightly into five parts at the edge; the corolla conſiſts of a ſingle petal, divided into five oval, hollow, patent ſegments: the ſtamina are ſubulated, and of the length of the corolla; the antheræ are oblong, crooked, and incumbent: the germen is roundiſh; the ſtyle is ſlender, and of the length of the ſtamina: the ſtigma is capitated; the fruit is a large, oblong, turbinated capſule, formed of five woody valves, and containing five cells: the ſeeds are roundiſh, and affixed to a columnar, pentagonal receptacle, and have a quantity of fine down or cotton adhering to them.

Xylon foliis digitatis, caule ſpinoſo. **Prickly Cotton-tree.**
The prickly-ſtalked, digitated-leaved Xylon.

This grows to be a large tree, fifty feet, or more, in height: the wood is ſpungy and ſoft; the bark brown and prickly: the leaves are of a digitated form, and rounded in their circumference; they ſtand on long, ſtriated pedicles, nodoſe at the baſe: the flowers are large, and of a beautiful purple; they grow in cluſters: the fruit contains a great quantity of cottony matter about the ſeed.

It is a native of both the Eaſt and Weſt Indies. C. Bauhine calls it, Goſſipium arboreum caule ſpinoſo.

The other ſpecies are, 1. The willow-leaved, not prickly Xylon. 2. The larger-flowered, not prickly Xylon. 3. The fine downed Xylon or Cotton.

MIMOSA.

THE calyx is a very ſmall perianthium, formed of a ſingle leaf, and divided into five ſhort ſegments at the top: the corolla is ſmall; it conſiſts of a ſingle petal of a campanulated form, lightly divided into five ſegments: the ſtamina are a number of very long, capillary filaments; the antheræ are incumbent: the germen is oblong; the ſtyle is filiform, and ſhorter than the ſtamina: the ſtigma is truncated; the fruit is a

long legumen or pod, with ſeveral tranſverſe partitions in it: the ſeeds are numerous and roundiſh.

This genus comprehends the Mimoſa of Tournefort, the Acacia of the ſame author, and the Inga of Plumier. In ſome the ſtamina are very numerous; in others they are regularly ten, in others only five, and in ſome but four; in this laſt caſe, the calyx and corolla are divided only into four ſegments. The legume of the Mimoſa is articulated, and the leaves are ſenſitive; the legume of the Acacia is cylindric, and the leaves do not move on the touch; the legume of the Inga is fleſhy, and the leaves are pinnated, and their rib alated.

After theſe diſtinctions, the deſcription of even a ſingle ſpecies is not neceſſary. The Mimoſæ of authors are, 1. The narrow-leaved Mimoſa. 2. The broader-leaved Mimoſa. 3. The Mimoſa, with glomerated pods. 4. Prickly, large-leaved Mimoſa. 5. The prickly and more robuſt Mimoſa. 6. The Mimoſa, with leaves on long pedicles.

The Acaciæ of authors are very numerous, but all that are called diſtinct ſpecies are not ſuch: the more remarkable and certainly diſtinct are, 1. The Farneſian Acacia, with double, diſtinct ſpines. 2. The true Ægyptian Acacia, whence the Succus Acaciæ and Gum Arabic. 3. The great-leaved Acacia. 4. The purple-flowered Acacia, with compreſſed pods. 5. The broad-leaved, white-flowered Acacia. 6. The tamarind-leaved Acacia. 7. The purple, walnut-leaved Acacia. 8. The very ſmall-leaved Acacia. 9. The bull's-horn, or thick-ſpined Acacia. 10. The very numerous and ſmall-leaved Acacia. 11. The tall, yellow-flowered Acacia.

CARYOPHYLLUS.

THE calyx is double; there is a perianthium for the flower, and another for the fruit: the perianthium of the fruit is permanent, very ſmall, acute, and divided into four ſegments, and placed under the germen: the perianthium of the flower is placed upon the germen, and is compoſed of four roundiſh and hollow leaves: the corolla conſiſts of four petals, roundiſh, crenated, and ſmaller than the leaves of the cup: the ſtamina are numerous, capillary filaments; the antheræ are ſimple: the germen is oblong, large, and terminated by four rigid and patent corniculæ: the ſtyle is ſimple, and inſerted into a quadrangular receptacle; the ſtigma is alſo ſimple: the fruit is oval, and contains a ſingle cell, and is umbilicated with the corniculæ of the germen, which then become connivent: the ſeed is ſingle, oval, and large.

Of this genus there is but one known ſpecies.

CARYOPHYLLUS. The Clove-tree.

This grows to fifteen or twenty feet high; it's trunk is thick, and it's bark ſmooth and brown; the branches are numerous and ſpreading: the leaves ſtand very thick on them; they are four inches long, near two in breadth, and of the ſhape of thoſe of the bay-tree: the flowers ſtand in cluſters; they are ſmall, of a beautiful blue, and very fragrant.

It is a native of Ternate, and ſome of the Molucca Iſlands. The cloves, uſed with us as a ſpice, are the embryo fruit, with the unopened flowers affixed to them. They are gathered in November.

MESNA.

THE calyx is a permanent perianthium, compoſed of four ſmall, oval leaves: the corolla conſiſts of four large, hollow, rounded petals: the ſtamina are very numerous filaments, of the length of the cup: the antheræ are ſimple: the germen is roundiſh; the ſtyle is ſimple, and the ſtigma quadridentated: the fruit is a coriaceous capſule, of a roundiſh, acuminated figure, formed of four valves, and marked with as many elate ſutures running longitudinally: the ſeeds are four, large, fleſhy, of a turbinated, triquetrous form, and obtuſe.

Of this genus there is but one known ſpecies, an Aſiatic, figured in the Hortus Mal. 3. 53.

12

Dryas

Eugenia

The Silver Tree

13

Mesna

Psidium

Styrax

Mespilus

Saracena

Chelidonium

Tilia

Caryophyllus

Amygdalus

Rubus

Nymphæa

Podophyllum

Punica

Prunus

Vateria

Myrtus

Padus

Syringa

Tormentilla

Argemone

Capparis

Ironia

B. Cole Sculp.

MAMMEA.

THE calyx is a deciduous perianthium, compoſed of two ſmall, concave, oval leaves: the corolla conſiſts of four roundiſh, hollow, patent petals, larger than the leaves of the cup: the ſtamina are numerous, ſimple filaments, of about half the length of the corolla; the antheræ are roundiſh; the germen is roundiſh; the ſtyle is conic, and of the length of the ſtamina; the ſtigma is ſimple and permanent: the fruit is a very large, fleſhy berry, pointed with the ſtyle of a ſpherical figure, and containing only one cell: the ſeed is callous, and of an oval figure.

It is a native of South America, figured by Plumier 4.

CALOPHYLLUM.

THE calyx is a deciduous, coloured perianthium, divided into four ſegments: the corolla conſiſts of four roundiſh, hollow, patent petals, and is larger than the cup: the ſtamina are numerous, capillary filaments, ſhorter than the corolla; the antheræ are roundiſh; the germen is roundiſh; the ſtyle is of the length of the ſtamina, and ſimple; the ſtigma is capitated; the fruit is a large, globoſe drupe, with only one cell: the ſeed is a large, ſingle, globoſe, acuminated nut.

It is a native of the Eaſt Indies, and of South America. Plumier calls it Calaba.

EUPHORBIA.

THE calyx is a rugoſe, bellied, coloured perianthium, permanent, compoſed of a ſingle leaf, and divided into four, ſometimes into five, ſegments at the edge: the corolla conſiſts of four, ſometimes five, petals; they are thick, gibbous, turbinated, truncated, and ſituated irregularly, alternately with the ſegments of the cup, and are affixed by their ungues to the edge of the cup; theſe, as well as the cup, are permanent: the ſtamina are numerous filaments, twelve, or more, ſlender and affixed to the receptacle, and longer than the corolla: the antheræ are globoſe and didymous; the ſtyle is ſimple and ſhort; the germen roundiſh, but three-cornered: the ſtigmata are three, ſemibifid and obtuſe: the fruit is a roundiſh, trilobated capſule, containing three cells, and hanging on the ſtyle, which becomes elongated; the ſeeds are ſingle and roundiſh.

This genus comprehends the Tithymalus, the Tithymaloides, the Eſula, and the Euphorbium of authors.

The Euphorbium has a fleſhy or angular ſtalk; and the petals, in ſome ſpecies, are trifid; it has no leaves. The Tithymalus has leaves on the ſtalk, and the ſtalk of the common kind; and the Tithymaloides has the calyx, gibbous on the lower ſide.

After theſe diſtinctions, deſcriptions of any of the ſpecies are not neceſſary. The ſpecies, called Euphorbia by authors, are, 1. The thick-ſtalked, cereus-like Euphorbia, from which the Euphorbium of the ſhops is obtained. 2. The thinner-ſtalked, cereus-like Euphorbia. 3. The ſeven-ribbed Euphorbia, with long ſpines. 4. The many-ribbed, tuberculous Euphorbia. 5. The four or five-ribbed, thick Euphorbia. 6. The tuberous, ſquammous-ſtalked Euphorbia. 7. The Meduſa Euphorbia. 8. The conic Euphorbia. 9. The opuntia-like Euphorbia. 10. The Euphorbia, without prickles.

Of thoſe, called by Boerhaave Tithymaloides, there are, 1. The large, myrtle-leaved Euphorbia. 2. The nerium-leaved Euphorbia. 3. The broader, nerium-leaved Euphorbia.

The ſpecies, called Tithymals by authors, are very numerous. We have, native in our own kingdom, 1. The wood-ſpurge, or great almond-leaved Euphorbia. 2. The longer-leaved, wood Euphorbia. 3. The rough-fruited Euphorbia. 4. The ſea-ſpurge, or Euphorbia. 5. The knobby-rooted Euphorbia. 6. The wild, broad-leaved Euphorbia. 7. The long-leaved, corn Euphorbia. 8. The round-leaved, ſea Euphorbia. 9. The dwarf, annual Euphorbia. 10. The ſun-ſpurge, or Euphorbia. 11. The little, round-leaved Euphorbia. 12. The little, purple, round-leaved Euphorbia.

The ſpecies of other parts of the world are yet more numerous: they are, 1. The broad-leaved, tree Euphorbia. 2. The ſoft-leaved, tree Euphorbia. 3. The roundiſh-leaved, tree Euphorbia. 4. The almond-leaved, tree Euphorbia. 5. The box-leaved, tree Euphorbia. 6. The great, long-leaved Euphorbia, or Cataputia. 7. The leſſer Cataputia. 8. The broad-leaved, Spaniſh Euphorbia. 9. The hoary Euphorbia. 10. The flax-leaved Euphorbia. 11. The red-headed Euphorbia. 12. The toad-flax-leaved, lunated-flowered Euphorbia. 13. The flax-leaved, tree Euphorbia. 14. The prickly, ſea Euphorbia. 15. The willow-leaved Euphorbia. 16. The ſhrubby, bog Euphorbia. 17. The little, hairy, round-leaved Euphorbia. 18. The cordated-leaved Euphorbia. 19. The procumbent Euphorbia.

TRIUMFETTA.

THERE is properly no calyx; ſome have taken the corolla for a calyx, but erroneouſly: the corolla conſiſts of five linear, erect, obtuſe petals; they are hollowed and bent backward; the point is prominent, below the apex, and they are deciduous: the ſtamina are ſixteen equal, erect, ſubulated filaments, of the length of the corolla; the antheræ are ſimple: the germen is roundiſh; the ſtyle is of the length of the ſtamina; the ſtigma is bifid and acute: the fruit is a globoſe capſule, every-where ſurrounded with hooked prickles, and contains four cells: the ſeeds are two, convex on one ſide, and angular on the other, but one of the two ſeeds of each cell uſually ripens.

It is a native of South America, and is figured by Plumier, 8.

PEGANUM.

THE calyx is a permanent perianthium, compoſed of five linear, erect, acute leaves, of the length of the corolla: the corolla is compoſed of five petals, of an oblong, oval figure, and placed erecto-patent: the ſtamina are fifteen ſubulated filaments, dilated at the baſe, and of about half the length of the corolla: the antheræ are oblong and erect: the germen is roundiſh, but ſomewhat trigonal; the ſtyle is filiform, and three-cornered, and of the length of the antheræ; the ſtigmata are three, and longer than the ſtyle: the fruit is a capſule, of a roundiſh but ſomewhat trigonal figure; it is compoſed of three valves, and contains three cells: the ſeeds are numerous, oval, and pointed.

PEGANUM. Wild Rue, or Harmel.

The root is fibrous; the ſtalks are numerous, firm, hard, and grow to a foot, or more, in height: the leaves are divided into a multitude of long and narrow ſegments; the flowers ſtand at the tops of the branches, and are large and white; the antheræ are yellow.

It is a native of the Eaſt, and grows in looſe ſand, where ſcarce any other plant can live. Tournefort calls it, Harmala; C. Bauhine, Ruta ſylveſtris flore albo magno; others, Ruta Syriaca.

ELÆOCARPUS.

THE calyx is a ſmall perianthium, compoſed of five oblong, pointed leaves: the corolla conſiſts of five petals; the ſtamina are a number of oblong, ſlender filaments; the antheræ are tumid; the germen is oval and thick; the ſtyle ſlender; the ſtigma capitated; the fruit is a drupe, with a criſp nucleus.

MICROCOS.

THIS genus is very nearly allied to the Elæocarpus: the calyx is a perianthium, compoſed of five oblong leaves: the corolla is formed of five petals; the ſtamina are numerous, oblong, ſlender filaments; the antheræ are oval; the germen is roundiſh; the ſtyle is ſlender, and the ſtigma ſmall: the fruit is a drupe, as in the former, but the nucleus is fibrous.

Theſe

Theſe two genera are ſufficiently diſtinguiſhed by their corollæ, calyces, and fruit; both from all the others of this diviſion, and from each other.

MENTZELIA.

THE calyx is a perianthium, divided into five ſegments; it is patent, and is placed on the extremity of a very long germen: the ſegments are of a lanceolated figure, and deciduous: the corolla conſiſts of five petals, of an obverſely ovated figure, patent, and ſomewhat larger than the calyx: the ſtamina are numerous, ſetaceous, erect filaments; the antheræ are ſimple; the germen is cylindric, and very long; it ſtands under the calyx; the ſtyle is ſetaceous, and of the length of the corolla; the ſtigma is ſimple: the fruit is a long, cylindraceo-clavate capſule, containing only one cell; the ſeeds are numerous, ſmall, and roundiſh.

It is a native of South America, figured by Plumier.

OCHNA.

THE calyx is a deciduous perianthium, compoſed of five, ſmall, patent leaves, of an ovato-lanceolated figure: the corolla conſiſts of five roundiſh petals; their ungues are of the length of the leaves of the calyx; they are patent, and very obtuſe at the extremities: the ſtamina are a number of very ſmall, connivent filaments: the germen is oval; the ſtyle ſubulated, longer than the ſtamina, and erect: the fruit is a very large, fleſhy, roundiſh, truncated receptacle, containing on each ſide a ſingle berry, of an oval figure, and immerſed at the baſe: the ſeed is ſingle and oval.

It is a native of South America, and is figured by Plumier, under the name of Jabotapita.

CISTUS.

THE calyx is a permanent perianthium, compoſed of five roundiſh, hollow leaves, two of which are alternately ſmaller, and placed lower than the reſt: the corolla conſiſts of five large, plane, patent petals, of a roundiſh figure: the ſtamina are a great number of capillary filaments, ſhorter than the corolla; the antheræ are roundiſh and ſmall; the germen is roundiſh; the ſtyle is ſimple, and of the length of the ſtamina; the ſtigma is plane and orbiculated: the fruit is a roundiſh, covered capſule; the ſeeds are numerous, roundiſh, and ſmall.

This genus comprehends the Ciſtus and the Helianthemum of Tournefort. The Ciſtus has a capſule with only one cell; that of the Helianthemum has five or ten cells.

1. *Ciſtus arboreus foliis rugoſis, ovatis, et lanceolatis.* **Long-leaved Male Ciſtus.**
The ſhrubby Ciſtus, with oval and lanceolated leaves.

The root is brachiated and creeping; it grows to four feet high: the ſtalks are brittle; the leaves toward the lower part grow together at their baſes in pairs, and are of an oval figure; the reſt are ſeparate, and pointed at the ends; they are all rugoſe and hoary. The flowers are as big as thoſe of the wild roſe, and of a pale fleſh colour.

It is a native of all the warmer parts of Europe. C. Bauhine calls it, Ciſtus mas folio oblongo incano; Parkinſon, Ciſtus mas vulgaris.

2. *Ciſtus ſtipulis quaternis, foliis oblongis, caule procumbente.* **Dwarf Ciſtus.**
The procumbent, oblong-leaved Ciſtus, with quaternate ſtipulæ.

The root is oblong and woody; the ſtalks are a foot long, numerous, hard, and procumbent: the leaves ſtand in pairs; they are half an inch long, and a third of an inch in breadth: the flowers are of the breadth of a ſhilling, and of a bright yellow.

It is common with us by road-ſides. C. Bauhine calls it, Chamæciſtus flore luteo.

The other ſpecies of the Ciſtus-kind are, 1. The rounder-leaved Ciſtus. 2. The great, hoary-leaved Ciſtus. 3. The oblong, narrow, hoary-leaved Ciſtus. 4. The tall, ſage-leaved Ciſtus. 5. The procumbent, ſage-leaved Ciſtus. 6. The narrow-leaved Ciſtus Ladanifera. 7. The willow-leaved Ciſtus Ladanifera. 8. The bay-leaved Ciſtus Ladanifera. 9. The poplar-leaved Ciſtus Ladanifera. 10. The broader, hairy-leaved Ciſtus Ladanifera. 11. The narrower, hairy-leaved Ciſtus Ladanifera. 12. The roſemary-leaved Ciſtus Ladanifera.

Of the Helianthemum, or dwarf Ciſtus-kind, are, 1. The narrow-leaved, hairy, white-flowered Ciſtus. 2. The ſerpyllum-leaved, yellow-flowered Ciſtus. 3. The myrtle-leaved Ciſtus. 4. The narrow-leaved, taller Ciſtus. 5. The thyme-leaved Ciſtus. 6. The ſhrubby, marjoram-leaved Ciſtus. 7. The ſmooth, thyme-leaved Ciſtus. 8. The willow-leaved Ciſtus. 9. The lavender-leaved Ciſtus. 10. The ſpotted-flowered Ciſtus. 11. The umbellated-flowered Ciſtus. 12. The broad-leaved Ciſtus. 13. The narrow-leaved Ciſtus. 14. The plantain-leaved Ciſtus. 15. The origanum-leaved Ciſtus. 16. The Ciſtus, with narrow leaves, hoary underneath.

CORCHORUS.

THE calyx is a deciduous perianthium, compoſed of five erect, acute leaves, of a lineari-lanceolated figure: the corolla conſiſts of five oblong, obtuſe petals, narroweſt at the bottom, erect, and of the length of the cup: the ſtamina are a great number of capillary filaments, ſhorter than the corolla; the antheræ are ſmall: the germen is oblong and ſulcated; the ſtyle is thick and ſhort, and the ſtigma is bifid: the fruit is a very large cylindric, acuminated pod, compoſed of five valves, ſometimes only of two, and contains five cells: the ſeeds are numerous, angular, and acuminated.

Corchorus capſulis oblongis ventricoſis.
The oblong and ventricoſe-podded Corchorus. Jew's Sallad.

The root is oblong and white; the plant riſes to a foot and half high: the ſtalk is ſmooth; the leaves are oblong, three inches in length, and half as much in breadth, ſerrated round the edges, and the loweſt ſerratures longer than the reſt, and terminating in a kind of hair, that bends back with them: the flowers are yellow, and of the breadth of a ſhilling; the pods are three inches long, and ſtriated with yellow lines.

It is a native of Ægypt. C. Bauhine calls it, Corchorus Plinii; J. Bauhine, Corchorus, ſive Melochia.

The other ſpecies are, 1. The roundiſh, podded Corchorus. 2. The linear, podded Corchorus.

SAUVAGEA.

THE calyx is a permanent perianthium, compoſed of five acute, lanceolated leaves: the corolla conſiſts of five obtuſe, equal petals, ſhorter than the leaves of the cup: the nectarium conſiſts of five leſſer leaves, placed alternately with the petals: the ſtamina are numerous, capillary filaments, ſhorter than the petals, and ſituated out of the corolla, but within the cup: the antheræ are roundiſh; the germen is oval; the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is ſimple; the fruit is an oval, acuminated capſule, covered by the cup, containing one cell, and in it a number of ſeeds.

TILIA.

THE calyx is a perianthium, divided into five parts, hollow, coloured, deciduous, and nearly of the ſize of the corolla: the corolla conſiſts of five oblong, obtuſe petals, crenated at the extremities: the ſtamina are numerous filaments, thirty, or more; they are ſubulated, and of the length of the corolla; and the antheræ are roundiſh: the germen is roundiſh; the ſtyle is filiform, and of the length of the ſtamina; the ſtigma is obtuſe and pentagonal: the fruit is a coriaceous capſule, of a globoſe figure, divided into five cells, formed of five valves, and opening at the baſe: the

ſeeds

ſeeds are ſingle and roundiſh; one ſeed only of the five uſually ripens, and the very cells of the others often diſappear, ſo that the fruit ſeems unilocular.

Tilia foliis latioribus profundius ſerratis. The common Lime.
The broader and more deeply ſerrated-leaved Tilia.

The tree grows to fifty feet high. The wood is white; the bark dark brown; the branches are numerous; the leaves two inches and a half long, and two inches broad; they are deeply ſerrated at the edges. The flowers are white and fragrant.

It is common in our plantations. C. Bauhine calls it, Tilia fœmina folio majore.

The other ſpecies are, 1. The ſmaller-leaved Tilia. 2. The hairy-leaved Tilia, with red twigs.

VATERIA.

THE calyx is a ſmall, acute, permanent perianthium, divided into five ſegments: the corolla conſiſts of five oval, patent petals: the ſtamina are numerous filaments, ſhorter than the corolla: the antheræ are ſimple; the germen is roundiſh; the ſtyle is ſimple and ſhort; the ſtigma is capitated: the fruit is a turbinated, coriaceous capſule, ſituated on the ſtyle, which is reflex, and marked with three ſutures; it is formed of three valves, and contains one cell: the ſeed is ſingle and oval.

It is an Aſiatic, deſcribed in the Hortus Malabaricus, vol. 4. fol. 15.

CHRYSOBALANUS.

THE calyx is a permanent perianthium, formed of a ſingle leaf, plane, and divided into five parts at the top: the corolla conſiſts of five plane, oval, patent petals: the ſtamina are numerous, erect, villoſe filaments, placed in a circular order: the antheræ are ſmall; the germen is oval: the fruit is a large, oval berry, with one cell; the ſeed a brittle, rugoſe, oval nut, with five remarkable furrows.

It is an American, deſcribed by Plumier, under the name of Icaco.

PLINIA.

THE calyx is a ſmall, plane, acute perianthium, formed of a ſingle leaf: the corolla conſiſts of a ſingle petal, divided into five oval, hollow ſegments: the ſtamina are numerous, capillary filaments, of the length of the corolla: the antheræ are ſmall; the germen is ſmall; the ſtyle is ſubulated, and more than of the length of the ſtamina: the ſtigma is ſimple: the fruit is a large, globoſe berry, ſtriated, and containing only one cell: the ſeed is ſingle, very large, globoſe, and ſmooth.

It is an American, figured by Plumier.

PORTULACA.

THE calyx is a ſmall, bifid, permanent perianthium, compreſſed at the top, and ſituated on the germen: the corolla conſiſts of five plane, erect, obtuſe, emarginated petals, larger than the calyx: the ſtamina are very numerous, capillary filaments, of about half the length of the corolla: the antheræ are ſimple; the germen is oval; the ſtyle is ſimple and ſhort: the ſtigmata are ſix in number, oblong, and of the length of the ſtyle: the fruit is an oval, covered capſule, containing only one cell, and opening horizontally at the middle: the ſeeds are numerous and ſmall.

Portulaca foliis cuneiformibus ſeſſilibus. Common Purſlain.
The Portulaca, with cuneiform leaves without pedicles.

The root is oblong, white, and woody. The ſtalks are numerous, procumbent, and a foot long, reddiſh, thick, round, and ſucculent. The leaves are thick and ſucculent, narroweſt at the baſe, and broadeſt at the other extremity. The flowers are ſmall and yellow; the fruit is of the ſize of a barley-corn.

It is a native of France and Italy, and is common in our gardens. C. Bauhine calls it, Portulaca latifolia ſativa; it is eaten at our tables.

The

The other ſpecies are, 1. The narrow-leaved Portulaca. 2. The broad-leaved, red-flowered Portulaca. 3. The oblong, narrow, and gloſſy-leaved Portulaca. 4. The procumbent, capparis-leaved Portulaca. 5. The woolly Portulaca.

ANACAMPSEROS.

THE calyx is a permanent, bivalve perianthium, of an ovato-acuminated figure; the valves are hollowed, acute, and embrace one another: the corolla conſiſts of five roundiſh, hollow, patent petals, nearly equal in ſize: the ſtamina are numerous, capillary filaments, of about half the length of the corolla: the antheræ are ſimple; the germen is roundiſh; the ſtyle is ſimple; the ſtigmata are three, and are thick: the fruit is an oval, but ſomewhat triangular, capſule, formed of three valves, containing three cells: the receptacle is free: the ſeeds are numerous, ſmall, and roundiſh.

This genus comprehends the Telephiaſtrum of Dillenius.

Anacampſeros foliis ovatis convexis acutiuſculis.

The Anacampſeros, with oval, convex, and ſomewhat acute leaves.

The root is white and fibrous: the ſtalk is round, very ramoſe, and procumbent: the leaves are thick, ſucculent, and pointed at the extremities: the flowers ſtand on long pedicles, at the extremities of the branches; they are of a bright and beautiful red colour.

It is a native of Ethiopia, but it is kept in ſome of our ſtoves. Dillenius calls it, Telephiaſtrum flore globoſo; Ray, Portulaca ſempervirens flore rubro.

The other ſpecies are, 1. The tree Anacampſeros, with cuneiform leaves. 2. The ſhort-leaved Anacampſeros.

THEA.

THE calyx is a very ſmall, plane, permanent perianthium, divided into ſix roundiſh, obtuſe leaves: the corolla conſiſts of ſix large, roundiſh, hollow, equal petals: the ſtamina are numerous filaments, about two hundred; they are very ſlender, capillary, and ſhorter than the flower: the antheræ are ſimple; the germen is globoſe and trigonal: the ſtyle is ſubulated, and of the length of the ſtamina: the ſtigma is triple: the fruit is a capſule, formed of three globular bodies, growing together; it contains three cells, and opens into three parts at the top: the ſeeds are ſingle, globoſe, and internally angulated.

Of this genus there is but one known ſpecies.

THEA. The Tea-tree.

This ſhrub grows to five feet high, and is very ramoſe. It's root is ſpreading and fibrous. It's leaves are about an inch long, near half an inch broad, ſerrated, and terminate in a point. The flowers are large, white, and very beautiful.

It is a native of China and Japan. It is planted alſo in many parts of the Eaſt, for the ſake of it's leaves, which are our Tea. All the kinds of that precious commodity are the leaves of the ſame ſpecies, and differ only according to the time at which they are gathered, and the manner of curing them; ſome are gathered in the bud, ſome, when opening, and ſome, when more fully expanded; and ſome are dried with artificial heat, ſome without.

BIXA.

THE calyx is a very ſmall, permanent perianthium, divided into five ſhort ſegments at the top: the corolla is double; the exterior one conſiſts of five large, oblong, equal, and thick petals; the interior, of five petals alſo, like thoſe of the other, but thinner: the ſtamina are numerous, ſetaceous filaments, of about half the length of the corolla: the antheræ are erect; the germen is oval; the ſtyle is filiform, and of the length of the ſtamina: the ſtigma is parallely bifid, and compreſſed: the fruit

is

is an ovato-cordated, compreſſed capſule, ſurrounded with hairs, formed of two valves, opening at the angles, containing only one cell, but with an interior bivalve membrane: the ſeeds are numerous, turbinated, and truncated at the umbilicus: the receptacle is linear, longitudinal, and grows to the middle of the valves.

Of this genus there is but one known ſpecies.

BIXA. The Roucou-tree.

The tree riſes to twenty or thirty feet high; the wood is white, the bark brown. The leaves ſtand alternately; they are of a heart-like ſhape, pointed at the extremity, about three inches long, and are placed on long pedicles. The flowers ſtand in cluſters, at the extremities of the branches, and are large and white. The fruit is of the ſize of a large plum.

It is a native of the warmer parts of America. Tournefort calls it, Mitella maxima tinctoria; Plukenet, Orleana, or Orellana folliculis lappaceis. A reddiſh matter, uſed in dying, is prepared from the fruit, and other parts of the tree, called, by a very improper name, Terra Orleana.

Claſs the Thirteenth. Order the Second.

POLYANDRIA DIGYNIA.

Plants which have in every flower numerous ſtamina and two ſtyles.

HELIOCARPUS.

THE calyx is a deciduous perianthium, compoſed of four long, and ſomewhat broad, linear, and patent leaves: the corolla conſiſts of four petals, conſiderably ſhorter and narrower than the leaves of the cup, but alſo linear in figure: the ſtamina are ſixteen ſubulated filaments, nearly of the length of the cup: the antheræ are didymous, linear, and incumbent: the germen is roundiſh: the ſtyles are two, erect, and of the length of the ſtamina: the ſtigmata are acute and diſtant: the fruit is a pedunculated capſule, of a turbinated, oval figure, containing two cells, and ſurrounded perpendicularly with pinnately ramoſe radii: the ſeeds are ſingle and oval.

It is a native of America, and is deſcribed by Houſton.

PÆONIA.

THE calyx is a ſmall, permanent perianthium, compoſed of five roundiſh, hollow leaves, unequal both in their ſize and ſituation: the corolla conſiſts of five very large, roundiſh, hollow, patent petals, narroweſt toward the baſe: the ſtamina are very numerous, ſhort, capillary filaments: the antheræ are large, oblong, quadrangular, erect, and contain four cells: the germina are two; they are oval, erect, and hairy: there are no ſtyles; the ſtigmata are compreſſed, oblong, obtuſe, and coloured: the fruit conſiſts of two capſules, reflexo-patent, of an oblong, oval figure, hairy, containing each one cell, formed each of a ſingle valve, and opening longitudinally inwards: the ſeeds are numerous, oval, ſmooth, beautiful, and coloured. The number of the germina, though naturally two, varies greatly; in ſome flowers there are five.

PÆONIA. The Piony.

The root is compoſed of a number of oblong tuberoſities. The plant riſes to three feet high. The ſtalks are round, reddiſh in many places, ramoſe, and robuſt. The leaves are compoſed of ſeveral ſmaller ones, and are of a bluiſh-green colour on the upper ſurface, and hoary underneath. The flowers ſtand ſingly on the tops of the branches; they are as large as roſes, and of a beautiful crimſon colour.

This is the natural ſtate of the Piony; culture gives it double flowers, and alters their colour into that of all the degrees between a deep blood colour and white. The leaves of the plant alſo become broader or narrower, from the ſame means; the ſpecies, however, is the ſame in all. Authors have called the varieties by names, as if diſtinct ſpe-

cies; Pæonia fœmina, Pæonia multiplex, &c. Tournefort enumerates near twenty of them.

It is a native of ſome parts of Europe, and of the iſlands of the Archipelago. C. Bauhine and others call it, Pæonia mas. It's root is an antiepileptic.

CALLIGONUM.

THE calyx is a permanent perianthium, compoſed of five roundiſh and hollowed leaves: there is no corolla: the ſtamina are numerous, very ſmall filaments: the antheræ are didymous; the germen is oval: there is no ſtyle, but the ſtigmata are two, and obtuſe: the fruit is an oval, compreſſed, ſtriated, hairy pericarpium, with bifid tops, turning backwards: the ſeed is ſingle.

This genus comprehends the Polygonoides of Tournefort.

Claſs the Thirteenth. Order the Third.

POLYANDRIA TRIGYNIA.

Plants which have numerous ſtamina and three ſtyles in every flower.

RESEDA.

THE calyx is a perianthium, formed of a ſingle leaf, and divided into ſeveral narrow, erect, acute, permanent ſegments; two of theſe are placed at a greater diſtance than the reſt, for the uſe of the melliferous petal: the corolla conſiſts of certain unequal petals, ſome one of them always ſemitrifid; the upper one gibbous at the baſe, containing a honey-like juice, and of the length of the calyx: the nectarium is a plane, erect gland, produced from the receptacle, placed on it's upper ſide, between the ſtamina and the upper petal, and connivent with the baſe of the petals, more dilated from the ſame ſide: the ſtamina are numerous, ſhort filaments: the antheræ are erect, obtuſe, and of the length of the corolla: the germen is gibbous, and terminates in ſome very ſhort ſtyles: the ſtigmata are ſimple: the fruit is a gibbous, angulated capſule, acuminated with the ſtyles, and open between them; it contains only one cell: the ſeeds are numerous, kidney-ſhaped, and grow to the angles of the capſule.

This genus comprehends the Reſeda luteola and Seſamoides of Tournefort; but it varies ſo extremely in it's fructification, that there is not in all botany a genus ſo difficult to be characteriſed or aſcertained; the ſeveral ſpecies have ſurpriſing variations from one another, though evidently all of the ſame family. The eſſential characters are the trifid petals, one of them melliferous at the baſe, and the open capſule.

Reſeda foliis omnibus trifidis, inferioribus pinnatis.
The Reſeda, with all the leaves trifid, and the lower ones pinnated. **Baſe Rocket.**

The root is oblong and white. The ſtalks are numerous, ſlender, and a foot and a half high. The leaves are finely divided into narrow, trifid ſegments. The flowers are ſmall and yellow, and are placed in long ſpikes, at the tops of the ſtalk and branches.

It is a native of England, in dry places. C. Bauhine calls it, Reſeda vulgaris; and, it's leaves being ſometimes curled up, authors have made another ſpecies from this variety, under the name of Reſeda criſpa.

The other ſpecies are, 1. The pinnated-leaved, great Rocket. 2. The whole-leaved Reſeda, or Phyteuma. 3. The little, white Reſeda, called Seſamoides Salamanticum parvum. 4. The linaria-leaved Reſeda. 5. The broad-leaved, yellow Reſeda. 6. The willow-leaved Reſeda, called Luteola, or dyers-weed. 7. The little, toad-flax leaved Reſeda, or Luteola. 8. The purple-flowered Reſeda. 9. The ſtellated-fruited Reſeda.

DELPHINIUM.

THE Delphinium has no calyx: the corolla conſiſts of five unequal petals, diſpoſed circularly; of theſe the upper one is anteriorly more obtuſe than the others, and is emarginated, and extended behind into a tubulated horn, which is ſtrait, long, and obtuſe; the others are of an ovato-lanceolated figure, and patent, and are nearly equal: the nectarium is bifid, and is placed anteriorly among the petals on the upper part; behind it is protended outwards, and is incloſed in the tube of the corolla: the ſtamina are numerous, very ſmall, ſubulated filaments, broadeſt at their baſe, and inclinated toward the petal that has the ſpur: the antheræ are erect and ſmall; the germina are ſometimes three, ſometimes there is but one, of an oval figure; the ſtyles are of the length of the ſtamina; the ſtigmata are ſimple and reflex: the fruit conſiſts of one, or of three, capſules, of an ovato-ſubulated figure, ſtrait, compoſed of a ſingle valve, and opening inwards: the ſeeds are numerous and angular.

This genus comprehends the Delphinium of Tournefort, the Buccinum of Malphigi, and the Staphiſagria; but the nectarium in the Staphiſagria is double.

Delphinium caule ſimplici, nectariis monophyllis. Lark's-ſpur.
The Delphinium, with a ſimple ſtalk and one-leaved nectaria.

The root is fibrous. The plant riſes to two or three feet high. The ſtalk is ſlender, but ſtrong. The leaves are placed alternately, and very cloſe; they are of a deep green colour, divided into five ſegments, and ſmooth. The flowers are large, and naturally of a fine deep blue colour; but they vary from this into red and white.

It is common in gardens. C. Bauhine calls it, Conſolida hortenſis flore ſimplici majore; Tournefort, Delphinium vulgare.

Tournefort has enumerated not leſs than four-and-twenty varieties of this, as diſtinct ſpecies. The other really diſtinct ſpecies of Delphinium are, 1. The tall, hoary Delphinium. 2. The aconite-leaved Delphinium, called Aconitum lycactonum. 3. The narrower-leaved Delphinium; this has alſo been divided into ten or a dozen ſpecies by Tournefort. 4. The platanus-leaved Delphinium, called Staphiſagria, or Staveſacre, the ſeeds of which are kept under that name in the ſhops, and uſed to deſtroy vermin in children's heads.

ACONITUM.

THERE is no calyx: the corolla conſiſts of five unequal petals, the oppoſite ones equal; the upper petal is galeated and tubulated, inverted, and has it's back upwards; it is obtuſe, and it's top is turned back to the very baſe; it is acuminated, and the baſe is oppoſite: the too lateral petals are broad, rounded, erecto-oppoſite, and connivent; the two lower ones are oblong, and bend downwards: the nectaria are two; they are ſtriated under the upper petal; they are hollow, nutant, and have an oblique opening, and a crooked tail, and they are placed upon long, ſubulated filaments, or peduncles: the ſtamina are numerous, very ſmall, ſubulated filaments, broadeſt toward the baſe, and inclinated toward the upper petal: the antheræ are erect and ſmall: the germina are in moſt ſpecies three, in ſome five; they are oblong, and terminate in ſo many ſtyles, of the length of the ſtamina: the ſtigmata are reflex and ſimple: the fruit is compoſed of as many capſules as there were germina; they are of an ovato-ſubulated figure, ſtrait, formed each of a ſingle valve, and open inwards: the ſeeds are numerous, angular, and rugoſe.

This genus comprehends the Aconitum, Napellus, and Anthera of Tournefort, Rivinus, &c.

Aconitum

Aconitum foliorum laciniis linearibus, distinctis, ubique ejusdem latitudinis.

The Aconite, with the segments of the leaves linear and distinct, and all the way of the same breadth.

Healing Wolf's Bane.

The root is composed of a number of oval tubera, furnished with some fibres; they are brown without, and white within: the plant grows to a foot, or more, in height; the stalk is rigid, striated, and hairy: the leaves are divided into long, narrow segments, of a dusky green on the upper side, and hoary underneath: the flowers are moderately large, and yellow, and are of a good smell.

It is a native of the Alps and Pyrenees; it's root is kept in the shops, under the name of Anthoræ Radix, and supposed an alexipharmic. C. Bauhine calls it, Aconitum salutiferum.

The other species of Aconite are, 1. The plantain-leaved, yellow Aconite. 2. The finely, divided-leaved Aconite. 3. The great, blue Aconite, or Napellus. 4. The narrow-leaved, inflex-spiked Aconite. 5. The broader-leaved, reflex-spiked Aconite. 6. The dwarf, blue-flowered Aconite. 7. The many-flowered, pyramidal-spiked Aconite. 8. The tall, dark-leaved Aconite.

Class the Thirteenth. Order the Fourth.

POLYANDRIA TETRAGYNIA.

Plants which have numerous stamina and four styles in each flower.

TETRACERA.

THE calyx is a permanent perianthium, composed of six roundish, patent leaves; the exterior ones alternately shorter: the stamina are numerous, simple filaments, of the length of the calyx; they are permanent, and the antheræ are simple: the germina are four, oval and separate from one another: the styles are subulated and very short; the stigmata are obtuse: the fruit is composed of four capsules; they are of an oval figure, reflex, formed each of a single valve, opening by a future in the upper part, and containing only one cell: the seeds are single, roundish, and covered.

This is an American described by Houston, but confounded with the Petræa.

Class the Thirteenth. Order the Fifth.

POLYANDRIA PENTAGYNIA.

Plants which have numerous stamina and five styles in every flower.

AQUILEGIA.

THERE is no calyx; the corolla consists of five plane, patent, equal petals, of a lanceolato-ovate figure: the nectaria are five in number; they are equal, and stand alternately with the petals: they are corniculate, and grow gradually wider at their upper part; their opening is oblique, ascending upwards, and internally affixed to the receptacle; in the lower part they are carried into a tube, which is long, attenuated, pendulous, and has it's extremity obtuse and crooked: the stamina are numerous, subulated filaments, from thirty to forty; the exterior ones are the shorter: the antheræ are oblong, erect, and of the height of the nectaria: the germina are five, of an ovato-oblong figure, and terminate in subulated styles, longer than the stamina; the stigmata are erect and simple. There are ten short, rugose paleæ, which separate the germina: the fruit consists of five strait, parallel, cylindric, acuminated capsules; each consists of a single valve, and opens from the top inwards: the seeds are numerous, oval, carinated, and adhere to the future.

Aquilegia

Aquilegia nectariis incurvis. **Common Columbine.**
The Aquilegia, with crooked nectaria.

The root is large, oblong, and fibrated; the plant riſes to two feet high: the ſtalks are ſlender and branched; the leaves are of the compoſite kind; their pedicles are uſually divided in a ternate manner, and the leaves are three on each ultimate pedicle; they are broad, and of a bluiſh-green: the flowers hang from the tops of the ſtalks; they are large, and naturally of a beautiful blue, ſometimes reddiſh or white.

C. Bauhine calls this, Aquilegia ſylveſtris; others, Aquilegia ſimplex ſive vulgaris. Culture makes a great variety in the colour and ſtructure of the flowers, rendering them double, &c. Tournefort and others have deſcribed all theſe varieties as diſtinct ſpecies, under the names double Columbines, roſe Columbines, and the like.

The other really diſtinct ſpecies are, 1. The early, dwarf Aquilegia, with ſtrait nectaria. 2. The ſmall-flowered, thalictrum-leaved Aquilegia. 3. The great-leaved, ſmaller-flowered Aquilegia.

NIGELLA.

THERE is no calyx, though in ſome ſpecies the floral leaves give an appearance of one: the corolla conſiſts of five plane, oval, obtuſe petals, patent, and narroweſt toward the baſe: the nectaria are eight, they are very ſhort, and are placed in a circular direction, and each is bilabiated: the outer lip is the larger, and ſtands loweſt; it is bifid, plane, convex, and marked with two dots: the interior one is ſhort and narrow; the ſtamina are numerous, ſubulated filaments, ſhorter than the corolla: the antheræ are compreſſed, obtuſe, and erect: the germina of the piſtil are, in ſome ſpecies, five, in others ten; they are oblong, compreſſed, convex, erect, and terminate in ſubulated ſtyles, which are angular, very long, revolute, and permanent: the ſtigmata are longitudinal and adnate: the fruit conſiſts of as many capſules as there were germina; they are oblong, compreſſed, acuminated, joined by an internal ſuture, and open upwards and inwards: the ſeeds are numerous, angular, and rough.

Nigella foliis involucro folioſo cinctis. **Common Nigella.**
The Nigella, with the leaves ſurrounded with a folioſe involucrum.

The root is oblong, hard, and yellow; the plant riſes to a foot and half high: the ſtalk is a foot high, ſmooth, ſtriated, and hollow; the leaves are divided into a number of fine narrow ſegments: the flowers are large, blue, and ſurrounded at the baſe with five floral leaves as with a cup.

It is a native of France. C. Bauhine calls it, Nigella anguſtifolia flore majore ſimplici cæruleo.

The other ſpecies are, 1. The yellow, oriental Nigella. 2. The hairy-leaved, white-flowered Nigella. 3. The Spaniſh Nigella, with broad leaves, and large blue flowers. 4. The Cretic Nigella.

Authors have taken varieties for ſpecies, and have extended the number much beyond this. Tournefort mentions a red-flowered, a white-flowered, and the like, as ſpecies which are, in reality, only varieties of the common kind.

Claſs the Thirteenth. Order the Sixth.

POLYANDRIA PENTAGYNIA.

Plants which have in every flower numerous ſtamina and ſix ſtyles.

STRATIOTES.

THE calyx is a permanent ſpatha, formed of two leaves, compreſſed, obtuſe, connivent, and carinated on each ſide: beſides this, there is alſo a perianthium, which is formed of a ſingle leaf, divided into three ſegments, and is acute and deciduous:

ous: the corolla conſiſts of three obverſely cordated, erecto-patent petals, of double the ſize of the cup: the ſtamina are twenty filaments, of the length of the perianthium, and are inſerted into the receptacle; the antheræ are ſimple: the germen ſtands under the receptacle of the perianthium: the ſtyles are ſix; they are divided into two parts, and are of the length of the ſtamina; the ſtigmata are ſimple: the fruit is a berry covered with the cup; it is of an oval figure, attenuated at each end, and in ſome meaſure hexaedral, and contains ſix cells: the ſeeds are numerous, oblong, crooked, and, as it were, alated.

Of this genus there is but one known ſpecies.

STRATIOTES. **Freſh-water Soldier.**

The root is compoſed of a number of long and thick fibres; the plant floats on the ſurface of the water, and theſe deſcend eight or ten inches from it, and have tufts of fibrils at their ends: the leaves are numerous, oblong, ſerrated at the edges, and in ſome degree prickly, and terminate in a point; they reſemble the leaves of aloes, but are not above four inches long: the flowers ariſe among theſe; they ſtand on ſhort pedicles, and are moderately large and white.

It grows in ſtanding waters in Lincolnſhire, and ſome other parts of England. C. Bauhine calls it, Aloe paluſtris; others, Militaris aizoides, and Aloides.

Claſs the Thirteenth. Order the Seventh.

POLYANDRIA POLYGYNIA.

Plants that have numerous ſtamina and numerous ſtyles in every flower.

DILLENIA.

THE calyx is a permanent perianthium, compoſed of five large, coriaceous, roundiſh, hollow leaves: the corolla conſiſts of five coriaceous, large, roundiſh, hollow petals: the ſtamina are very numerous filaments, arranged together in a globular form: the antheræ are oblong and erect; the germina of the piſtil are about twenty in number, of an ovato-oblong figure, and acuminated, compreſſed, and connected on their inner ſides: the ſtigmata are large, of a lanceolated figure, plane on the outſide, permanent, and form a kind of ſtar: the fruit is roundiſh, and is externally covered with a number of capſules equal to that of the ſtigmata; theſe are oblong, and divided by a furrow; within there is a large, columnar, pulpous receptacle: the ſeeds are numerous and very ſmall.

Of this genus there is but one known ſpecies.

DILLENIA.

The root is brachiated; the tree riſes to fifty feet high; the leaves are as large as thoſe of our laurel, and reſemble them in ſhape: the flower is five inches in diameter, white, and ſweet-ſcented; the fruit is as large as an orange.

It is a native of the Eaſt Indies, and is figured in the Hortus Malabaricus, under the name of Syalita.

LIRIODENDRON.

THE calyx is a deciduous perianthium, compoſed of three oblong, hollow, patent leaves, reſembling petals of a flower: the corolla conſiſts of petals, ſix or nine in number, oblong, erect, obtuſe, narroweſt at the baſe, and equal: the ſtamina are numerous filaments, ſhorter than the corolla, and linear, and are inſerted into the receptacle of the fructification: the antheræ are linear, and are ſituated longitudinally on the inner ſide of the filaments: the germina are numerous, and arranged in a conic form; the ſtyles are ſhort, and the ſtigmata ſimple; there is no pericarpium: the ſeeds are cloſely arranged together in an imbricated manner; they are numerous, and

and terminate each in a ſquamma of a lanceolated figure, and have an acute angle from the inner ſide, near the baſe of the ſquamma: the baſe is compreſſed and acute.

This genus comprehends the Tulipifera of authors. There is but one known ſpecies of it.

LIRIODENDRUM. The Tulip-tree.

The tree riſes to ſixty or ſeventy feet high, and is very ramoſe: the leaves are four or five inches long, three broad, and divided into three parts, but with the middle part truncated, or as if cut off: the flowers are an inch and a half long, and an inch in diameter, of a beautiful mixture of a greeniſh, reddiſh, and whitiſh, with ſome yellow, colour.

The tree is a native of North America; but it is common in our gardens. Cateſby calls it, Tulipifera; others, Tulipifera aceris folio, media lacinia veluti abſciſſa.

MAGNOLIA.

THE calyx is a deciduous perianthium, compoſed of three oval, hollow leaves, reſembling petals: the corolla conſiſts of nine oblong, hollow, obtuſe petals, narroweſt toward the baſe: the ſtamina are very numerous, ſhort, acuminated, compreſſed filaments, inſerted into the common receptacle of the piſtils below the germina: the antheræ are linear, and adhere on each ſide to the edges of the filaments: the germina are numerous, of an ovato-oblong figure, and cannaliculated receptacle: the ſtyles are bent back and contorted; the ſtigmata are hairy, and are placed longitudinally on the ſtyles: the fruit is a ſtrobilus, of an oval figure, compoſed of compreſſed, roundiſh, acute, ſcarcely imbricated, but cluſtered, capſules; they are ſeſſile, and each is formed of two valves, containing a ſingle cell, and opening outwards: the ſeeds are ſingle, and kidney-ſhaped, and hang by filaments from the ſinus's of the ſquammæ of the fruit.

Magnolia corollis ampliſſimis. The Laurel-leaved Tulip-tree.
The great-flowered Magnolia.

The root is brachiated; the trunk covered with a pale brown bark: the leaves are ten inches long, and four broad, firm, hard, and like thoſe of our laurel: the flowers are five or ſix inches in diameter, white, and very fragrant: the fruit is of the bigneſs of an egg, with a great deal of a beautiful purple in it.

It is a native of many parts of America; we have it in ſome of our gardens.

The other ſpecies are, 1. The long-leaved Magnolia. 2. The ſhort-leaved Magnolia.

UVARIA.

THE calyx is a perianthium, formed of three leaves; the corolla conſiſts of ſix petals: the ſtamina are very numerous, and cluſtered together; the ſtyles are numerous; and the fruit is compoſed of a multitude of pendulous berries, each containing ſeveral ſeeds.

Theſe characters diſtinguiſh the Uvaria ſufficiently, without any farther deſcription.

ANONA.

THE calyx is a ſmall perianthium, compoſed of three cordated, hollowed, and acuminated leaves: the corolla conſiſts of ſix cordated, ſeſſile petals, three alternately interior and ſmaller; there are ſcarce any viſible ſtamina, but the antheræ are extreamly numerous, and are placed on the ſides of the germen: the germen is placed on a roundiſh receptacle, and is itſelf of a roundiſh figure; there are no ſtyles, but a number of obtuſe ſtigmata: the fruit is a very large berry, of a roundiſh, oval figure, covered with a ſquammoſe, punctated bark, and containing only one cell: the ſeeds are numerous, hard, of an oval, oblong figure, and are placed circularly.

This genus comprehends the Guanabanus of Plumier.

Anona

Anona foliis lineari-lanceolatis.
The lineari-lanceolated-leaved Anona.

The tree grows to a conſiderable height; the bark is rough and brown; the branches numerous and thick: the leaves are eight inches long, and about two and a half broad, pointed at the ends, and of a firm texture: the flower is ſmall; the fruit is of the ſize of the largeſt orange, and covered with a ſcaly coat.

It is a native of the Eaſt and Weſt Indies. C. Bauhine calls it, Guanabanus Oviedi fructu ſquammato.

HEPATICA.

THE calyx is a permanent perianthium, formed of three oval leaves, and remote from the receptacle of the corolla: the corolla conſiſts of two or three ſeries of petals; there are three petals in each ſeries, and they are longer than the cup, and of an ovato-oblong figure: the ſtamina are numerous filaments, thirty, or more, of the length of the cup; the antheræ are didymous and erect: the germina are numerous, twenty, or more; they are oblong and acuminated; there are no ſtyles: the ſtigmata are obtuſely capitated; there is no pericarpium: the receptacle is very ſmall and obtuſe; and the ſeeds are arranged in it in a globular form: they are numerous, oval, but pointed at both ends, and ſlightly hairy.

Of this genus there is but one known ſpecies; but authors have made ſeveral, by deſcribing it's varieties as ſuch, under the names of the double blue-flowered Hepatica; the double red Hepatica, and the like.

PULSATILLA.

THE calyx is a uniflorous involucrum, placed remote, but proper, and compoſed of a ſingle leaf, divided into a number of fine narrow ſegments: the corolla conſiſts of ſix plane, erect, acuminated, long petals: the ſtamina are a great number of filiform filaments, of about half the length of the flower: the exterior ones ſtand loweſt; the antheræ are didymous and erect: the germina are numerous; the ſtyles are capillary, longer than the ſtamina, and permanent: the ſtigmata are ſimple; there is no pericarpium: the receptacle is capitated, oblong, tophous, and hairy: the ſeeds are numerous, compreſſed, and hairy, and have the ſtyles adhering to them, very long and hairy.

The involucrum is the character which diſtinguiſhes this genus from the Anemone.

Pulſatilla foliis decompoſitis ternatis.
The Pulſatilla, with ternate, decompound leaves.

The root is fibrous; the leaves are divided into a multitude of long and narrow ſegments, in a ternate order; they are of a duſky green, and not gloſſy: the ſtalk riſes to ſix or eight inches high, and the flower is large and beautiful; ſometimes blue, ſometimes red, ſometimes white.

It was originally brought from the Eaſt into our gardens, where culture has produced a great many varieties of it, which have been deſcribed by too many authors, under the names of diſtinct ſpecies, and called Anemone tenui folio, flore duplice, and the like. C. Bauhine calls this, Anemone tenui folio, ſimplici flore; Van Royen, Pulſatilla foliis ternatis.

The other ſpecies are, 1. The thicker-leaved, large-flowered Pulſatilla, or common Paſque flower. 2. The ſmaller-flowered, thinner-leaved Pulſatilla. 3. The ſmallage-leaved Pulſatilla. 4. The broad-leaved, yellow Pulſatilla.

ANEMONE.

THERE is no calyx: the corolla conſiſts of two or three orders of petals, three in each order or ſeries; they are of an oval figure, and erecto-patent: the ſtamina are numerous, capillary filaments, of about half the length of the corolla: the antheræ are didymous and erect; the germina are numerous, and collected into a head; the ſtyles are acuminated, and very ſhort; the ſtigmata are obtuſe; there is no pericarpium: the receptacle is globoſe or oblong, and attenuated and punctated: the ſeeds are numerous, acuminated, and have the ſtyles affixed to them.

This genus comprehends the Anemone, Anemonoides, and Anomone-Ranunculus of authors; they have endeavoured to diſtinguiſh theſe by the ſeeds, but there is no ſuch diſtinction in nature.

1. *Anemone foliis ſubrotundis et laciniatis, caule uniflori.* **Yellow Anemone.**
The roundiſh and laciniated-leaved, yellow-flowered Anemone.

The root is tuberous and oblong; the radical leaves are roundiſh, large, ſerrated at the edges, of a deep green on the upper part, and purpliſh underneath: they ſtand on long pedicles, and are of a firm texture: the ſtalk riſes to ſix inches high, and has on it three laciniated leaves; and from the origin of theſe riſes alſo a pedicle, which ſupports a large, ſingle, yellow flower.

It is a native of Portugal. C. Bauhine calls it, Anemone cyclaminis ſive malvæ folio lutea; J. Bauhine, Anemone latifolia flore flavo.

2. *Anemone ſeminibus acutis, foliolis inciſis, caule uniflori.* **White-wood Anemone.**
The acute-ſeeded, divided-leaved, ſingle-flowered Anemone.

The root is tuberous, oblong, and oblique; the leaves ſtand on long pedicles, and are divided into fine and numerous ſegments: the ſtalk is ſix inches high, and weak; the leaves on it are three, all growing from the ſame part, and like thoſe of the root: the flower is ſingle; on the ſummit of the ſtalk, it is large, and white or reddiſh.

It is common in our woods. C. Bauhine calls it, Anemone nemoroſa flore albo majore.

The other really diſtinct ſpecies are, 1. The yellow, wood Anemone, called Wood Ranunculus. 2. The trifoliate, oval-leaved Anemone. 3. The broad-leaved, red Anemone. 4. The rounder, geranium-leaved, large-flowered Anemone. 5. The upright, white, wild Anemone. 6. The large-flowered, five-leaved Anemone. Culture has made an infinite number of varieties in the colour and ſtructure of the flowers of theſe ſpecies, and too many authors have deſcribed thoſe varieties as ſpecies. Tournefort has no leſs than a hundred and fifty Anemonies.

ATRAGENE.

THE calyx conſiſts of four leaves; the corolla is formed of twelve petals; the ſtamina are very numerous; the ſtyles ſhort; the ſtigmata ſmall; the ſeeds are caudated. Theſe ſhort characters ſufficiently diſtinguiſh the Atragene from all the other plants of this claſs.

CLEMATIS.

THERE is no calyx; the corolla conſiſts of four lax, oblong petals, of an uncertain ſhape: the ſtamina are numerous, ſubulated filaments, ſhorter than the corolla: the antheræ adhere to the ſides of them; the germina are numerous, roundiſh, compreſſed, and terminate in ſubulated ſtyles, which are a longer than the ſtamina; the ſtigmata are ſimple; there is no pericarpium; the receptacle is capitated and ſmall; the ſeeds are numerous, roundiſh, compreſſed, and have the ſtyle adhering to them.

This genus comprehends the Clematitis, Flammula, and Viticella of authors. The Clematis has lanceolated petals and ſeeds, winged with long, hairy ſetæ; the Flammula has eight piſtils, orbiculated ſeeds, and a very long plume; the Viticella has deltoide petals, and ſeeds with naked and crooked points: ſome have five petals.

Clematis foliis pinnatis foliolis ovato-lanceolatis integerrimis. **Erect Flammula.**
The pinnated-leaved Clematis, with ovato-lanceolated foliola.

The root is fibrous and white; the ſtalks are woody, but very ſlender; they riſe to three feet, or more, in height, and ſupport themſelves erect; they are hollow and jointed: the leaves are compoſed of oval, but pointed, pinnules, and are of a blackiſh green on the upper ſide, and hoary underneath: the flowers are large and white.

It is a native of Germany. C. Bauhine calls it, Flammula recta; others, Flammula alba erecta.

The other ſpecies are, 1. The ſimple, lanceolated-leaved, blue Clematis. 2. The wild Clematis, called Traveller's Joy and Viorna. 3. The pear-leaved Clematis. 4. The five-leaved, creeping Clematis. 5. The ſerrated-leaved Clematis. 6. The dwarf Clematis. 7. The blue, erect, larger-leaved Clematis.

THALICTRUM.

THERE is no calyx; the corolla conſiſts of four roundiſh, hollow, *obtuſe, deciduous* petals: the ſtamina are numerous filaments, broadeſt in their upper part, compreſſed, and longer than the corolla: the antheræ are oblong and didymous: the ſtyles are numerous and very ſhort; the germina roundiſh, one on every ſtyle: the ſtigmata thick; the pericarpium conſiſts of a carinated, ſulcated bark, containing only one cell: the ſeed is ſingle and oblong.

This genus varies greatly in the ſeveral ſpecies. In ſome the corolla has five leaves; in ſome the ſtamina and piſtils are only twelve each: the ſtyles, which are placed under the germina, are in ſome long, in others ſhort; and in ſome the cortex of the ſeed has three longitudinal alæ.

Thalictrum caule folioſo ſulcato, panicula multiplici erecta. **Common Meadow Rue.**
The folioſo, ſulcated-ſtalked Thalictrum, with a multiple, erect panicle.

The root is compoſed of a number of long, brown fibres: the plant riſes to four feet high; the ſtalk is hollow, ſmooth, and ramoſe; the leaves are divided into a great number of broad and ſhort ſegments: the flowers are of a mixture of a blackiſh purple and white; they are ſmall, and ſtand in great cluſters on the tops of the ſtalks.

The plant is common in our meadows. Authors call it, Thalictrum vulgare.

The other ſpecies are, 1. The rugoſe, trifid-leaved Thalictrum. 2. The glaucous-leaved, yellow Thalictrum. 3. The purple, columbine-leaved Thalictrum. 4. The white, aquilegia-leaved Thalictrum, 5. The dwarf, American Thalictrum. 6. The great, yellow-flowered Thalictrum. 7. The aſphodel-rooted Thalictrum. 8. The early, dwarf Thalictrum. 9. The narrow-leaved Thalictrum. 10. The ſmall, broad-leaved Thalictrum. 11. The great, red-leaved Thalictrum. 12. The fœtid Thalictrum.

ADONIS.

THE calyx is a perianthium, compoſed of five obtuſe, hollow, ſomewhat coloured, and deciduous leaves: the corolla conſiſts of five oblong, obtuſe, beautiful petals, ſometimes there are more than five: the ſtamina are numerous, very ſhort, ſubulated filaments: the antheræ are oblong and inflected; the germina are numerous, and collected into a head; there are no ſtyles; the ſtigmata are acute and reflex; there is no pericarpium: the receptacle is oblong, ſpicated, and holds five ſeries of ſeeds: the ſeeds are numerous, irregular, and angular, gibbous at the baſe, and their apex reflex and prominent.

Adonis

Adonis radice annua. **Red Maiths.**
Annual-rooted Adonis.

The root is fibrous and white; the ſtalk is erect, thick, and firm, and grows to eighteen inches high. The leaves are divided into fine, long, narrow ſegments. The flowers ſtand at the tops of the branches; they are moderately large, and of a very beautiful ſcarlet colour.

It is a native of moſt parts of Europe. Authors call it, Flos Adonis and Eranthemum. Culture makes the flower larger and deeper-coloured.

RANUNCULUS.

THE calyx conſiſts of five oval, hollow, coloured leaves: the corolla conſiſts of five obtuſe petals, with ſmall ungues: the nectarium is a cavity in each petal, above the unguis: the ſtamina are numerous filaments, of about half the length of the flower: the antheræ are erect, oblong, obtuſe, and didymous: the germina are numerous, and collected into a head: there are no ſtyles; the ſtigmata are reflex, and very ſmall; there is no pericarpium; the receptacle connects the ſeeds by means of very minute peduncles: the ſeeds are numerous, irregular, and have reflex apices.

The eſſential character of this genus conſiſts in the nectarium, which is in ſome a ſimple hollow; in others it is ſurrounded with a membranaceous edge, and, in ſome, it is ſhut up with an emarginated ſquammula; the other parts of the fructification vary greatly.

This genus comprehends the Ranunculus, Ficaria, and Ranunculoides of authors. In the Ficaria the calyx has but three leaves, and the petals are numerous; in one ſpecies there are but five ſtamina.

Ranunculus foliis lanceolatis, caule erecto. **Great Spearwort.**
The upright-ſtalked, lanceolate-leaved Ranunculus.

The root is compoſed of a cluſter of white fibres. The plant riſes to three or four feet high. The ſtalk is round, ſmooth, thick, and branched. The leaves are a foot long, and about an inch broad, thick, ſmooth, and pointed. The flowers ſtand at the tops of the branches; they are yellow, beautiful, and of three quarters of an inch in diameter.

It is frequent in ditches in the Iſle of Ely, and other fenny places. C. Bauhine calls it, Ranunculus longifolius paluſtris major; others, Flammeus major.

The other ſpecies of Ranunculus are very numerous; thoſe wild in our fields and waters are, 1. The common creeping Ranunculus. 2. The bulbous-rooted Ranunculus. 3. The erect, pale-leaved Ranunculus. 4. The erect, aconite-leaved Ranunculus. 5. The little-flowered, annual, field Ranunculus. 6. The ſmall-flowered, wood Ranunculus. 7. The echinated-ſeeded, field Ranunculus. 8. The round-leaved, water Ranunculus. 9. The ivy-leaved, water Ranunculus. 10. The various leaved, water Ranunculus. 11. The fine-leaved, water Ranunculus. 12. The circinnated-leaved, water Ranunculus. 13. The fennel-leaved, water Ranunculus. 14. The leſſer Spearwort. 15. The plantain-leaved Ranunculus. 16. The Ranunculus, called little Celandine, or Pilewort.

The wild Ranunculi of other parts of the world are, 1. The graſſy-leaved Ranunculus. 2. The large-leaved, Apennine Ranunculus. 3. The ſmall-flowered, ſoft-leaved Ranunculus. 4. The aſphodel-rooted, cyclamen-leaved Ranunculus, or Thora. 5. The parnaſſia-leaved Ranunculus. 6. The water-caltrop-leaved Ranunculus. 7. The aſarum-leaved, nodoſe Ranunculus. 8. The apium-leaved Ranunculus. 9. The ſtellated, echinated, Cretic Ranunculus. 10. The broad-leaved, bullated, tuberous-rooted Ranunculus. 11. The purple-flowered, grumoſe-rooted, Aſiatic Ranunculus. 12. The broader-leaved, yellow-flowered, grumoſe-rooted, Aſiatic Ranunculus. 13. The rue-leaved, yellow Ranunculus. 14. The broad-leaved, Cretic, tuberous-rooted Ranunculus. 15. The ſmall-flowered, dwarf, round-leaved Ranunculus. 16. The tall, white, hairy Ranunculus. 17. The aconite-leaved, white Ranunculus. 18. The very broad-leaved, hairy, mountain Ranunculus. 19. The fine-leaved, mountain Ranunculus.

nunculus. 20. The great-flowered, rock Ranunculus. 21. The purple-flowered, ſmallage-leaved Ranunculus. 22. The pucedanum-leaved, water Ranunculus. 23. The fennel-leaved, hellebore-rooted Ranunculus. 24. The great-flowered, jointed-ſtalked, fennel-leaved Ranunculus. 25. The betony-leaved Ranunculus. 26. The bulbous, graſſy-leaved Ranunculus. 27. The ſingle-flowered, graſſy-leaved Ranunculus. 28. The dwarf, graſſy-leaved, white-flowered Ranunculus. 29. The plantain-leaved Ranunculus.

From the Aſiatic and ſome other ſpecies of this genus, particularly thoſe from the tenth to the fourteenth of this laſt diviſion, culture has raiſed all that beautiful variety of Ranunculus's of our gardens, which are by too many authors called diſtinct ſpecies.

ISOPYRUM.

THERE is no calyx: the corolla conſiſts of five equal, oval, patent, deciduous petals: the nectaria are five; they are equal, tubulated, and very ſhort; their openings are oblique, ſimple, and ſituated within the corolla: the ſtamina are numerous, capillary filaments, ſhorter than the corolla: the antheræ are ſimple; the germina are oval; the ſtyles are ſimple, and of the length of the germina: the ſtigmata are obtuſe, and of the length of the ſtamina: the fruit is compoſed of two crooked, lunated pods, containing each only one cell, and in it numerous ſeeds.

Theſe characters ſufficiently diſtinguiſh the Iſopyrum from all the reſt of this claſs.

HELLEBORUS.

THERE is no calyx: the corolla is compoſed of five, or more, large, hollowed, roundiſh petals: the nectaria are five; they are very ſhort, and placed circularly; they are each compoſed of a ſingle leaf, tubulated, with a ringent mouth, opening inwards, and they are narroweſt below: the ſtamina are numerous, ſubulated filaments: the antheræ are compreſſed, narroweſt below, and erect: the germina are corniculated, and terminate in ſubulated ſtyles: the ſtigmata are thick; the fruit is compoſed of ſeveral compreſſed, bicarinated capſules; the inferior carina ſhorter, the upper convex, and opening: the ſeeds are numerous, round, and affixed to a ſuture.

The eſſential character of this genus is in the nectarium; the reſt of the parts of fructification vary.

This genus comprehends the Trollius and Aconitum of Rivinus, and the Helleboraſter of authors. In the Trollius the petals are numerous and connivent, the nectaria unilabiated. In the Aconitum the petals are ſix, and deciduous, and the flower ſtands on a leaf. In the Helleboraſter the petals are five, and permanent; the piſtils from three to five.

Helleborus ſcapo biſloro ſubnudo, foliis pedatis. **True black Hellebore.**
The two-flowered Helleborus, with pedated leaves.

The root is black, and compoſed of a multitude of thick fibres, ariſing from a ſmall head. The leaves ſtand on pedicles of four or five inches long; they are large, and divided to the baſe, uſually into nine ſegments. The flowers grow on ſtalks of about four inches high; they are large and white.

It is a native of Germany. C. Bauhine calls it, Helleborus niger flore roſeo; others, Helleborus niger verus.

It's root is the black Hellebore of the ſhops, a purge and a deobſtruent, good in ſuppreſſions of the menſes.

The other ſpecies are, 1. The great-flowered, wild, black Hellebore. 2. The great, wild Hellebore. 3. The great-leaved Hellebore. 4. The narrow-leaved Hellebore. 5. The great-flowered, autumnal Hellebore. 6. The trifoliate Hellebore. 7. The yellow, dwarf Hellebore, or winter Aconite. 8. The globoſe-flowered Hellebore, called globoſe Ranunculus. 9. The ſmaller-flowered, globoſe Hellebore.

CALTHA.

THERE is no calyx: the corolla conſiſts of five large, oval, plane, patent, deciduous petals: the ſtamina are numerous, capillary filaments, ſhorter than the corolla: the antheræ are compreſſed, obtuſe, and erect: the germina are from five to ten in number, and are oblong, compreſſed, and erect: there are no ſtyles; the ſtigmata are ſimple: the fruit conſiſts of as many capſules as there were germina; they are ſhort, acuminated, patent, bicarinated, and open at the upper ſuture: the ſeeds are numerous and roundiſh, and adhere to the upper ſuture.

Of this genus there is but one ſpecies.

CALTHA. Marſh Marygold.

The root is fibrous; the ſtalk is round, thick, and a foot high. The leaves are two inches broad, crenated at the edges, and roundiſh. The flowers ſtand at the tops of the branches, and are very large and yellow.

It is common in our meadows. C. Bauhine calls it, Caltha paluſtris.

Claſs the Fourteenth.

DIDYNAMIA.

Plants which have in every flower two effective ſtamina and two uſeleſs ones.

The Didynamia comprehends the labiated and perſonated flowered Plants of Authors.

THE calyx is an erect, tubulated perianthium, formed of a ſingle leaf, divided into five ſegments, often unequal ones, and permanent: the corolla is monopetalous and erect; the baſe is tubulated; it contains a honey-juice, and performs the office of a nectarium: the limb is commonly ringent; the upper lip is ſtrait; the lower patent, divided into three ſegments; the middle one the larger. The ſtamina are four ſubulated filaments, inſerted into the tube of the corolla, and reclined towards it's back; two of them intermediate and ſhort, all running parallel, and rarely exceeding the corolla in length: the antheræ are uſually hid under the upper lip of the corolla, and connivent. The germen is uſually placed above the receptacle: the ſtyle is ſingle, filiform, and bent in the ſame manner as the ſtamina; it is uſually placed between them, and is a little longer than they are, and it's apex is bent: the ſtigma is uſually emarginated. The fruit, if there be any, is uſually bilocular: the ſeeds, if there is no fruit, are four, and are lodged in the bottom of the cup; if there be a fruit, they are more numerous, and are affixed to a receptacle ſituated in it's center.

Theſe are the characters common to all the genera of this claſs. After thus delivering them at large here, we ſhall not repeat them at the head of every genus, but give only, as the generical character, the particulars in which each genus differs from all the others; only in the firſt, the Teucrium, we ſhall deliver them at large, as a ſpecimen of their general diſtribution.

The eſſential character of the claſs is, that there are four ſtamina, two of which are ſhorter than the others, and are placed together, and connivent; and that the ſtyle is ſingle, and ſtands within an irregular corolla.

The genera of this claſs are very numerous; they may commodiouſly be divided into two ſeries, according to their wanting, or having, a pericarpium, under the titles of Gymnoſpermia and Angioſpermia; and theſe, as they have bilabiated or quinquifid cups, or as their ſtigmata are ſimple or double, and their corolla perſonated, patulous, or polypetalous, may be again arranged into ſeveral ſubdiviſions.

Class the Fourteenth. Series the First.

DIDYNAMIA GYMNOSPERMIA.

Plants which have two effective stamina and have no capsule for their seeds.

Division the First.

Such as have the calyx divided into five nearly equal segments.

TEUCRIUM.

THE calyx is a permanent perianthium, composed of a single leaf, slightly divided into five segments, and gibbous at the base: the corolla is ringent, and formed of a single petal: the tube is cylindric and short, and terminates in an incurvated opening: the upper lip is erect, acute, and deeply divided into two segments, which stand apart; the lower lip is divided into three segments; the lateral ones are of the figure of the upper lip, and somewhat erect; the middle one is much larger, and rounded: the stamina are four subulated filaments, longer than the upper lip of the corolla, crooked and prominent between the divisure of it: the antheræ are small; the germen is divided into four parts; the style is filiform, and like the stamina in figure and situation: the stigmata are two, and slender: the seeds are four, roundish, and lodged in the base of the cup.

This genus comprehends the Teucrium, Polium, Scordium, Chamædrys, Apiga, Pseudomarum, Iva, and Chamæpitys of authors; all which have been erroneously separated by Tournefort and Rivinus.

In the Teucrium the calyx is campanulated, and the middle segment of the lower lip is hollow. In the Polium the flowers are collected into clusters, terminating the branches. In the Chamædrys the flowers grow from the alæ of the leaves, and the calyx is campanulated. In the Marum the leaves are short and small, and the smell is acrid. In the Scordium there is a strong smell of garlic. In the Iva the calyx is very gibbous in the lower part. Such are the distinctions which have been supposed generical.

Teucrium foliis ovato-lanceolatis serrulatis, floribus sæpius binatis.
The ovato-lanceolate, serrated-leaved Teucrium, with flowers usually binate.

Water Germander, or Scordium.

The root is fibrous; the stalks are square, procumbent, and hairy. The leaves stand in pairs; they are three quarters of an inch long, half an inch broad, and of a pale green colour. The flowers are small and red; they usually grow two together, from the alæ of the leaves. The whole plant has a garlic-like smell.

It is a native of England, in wet places, but is not common. Authors call it, Scordium, and Scordium officinarum.

It is supposed a great alexipharmic, and, as such, is an ingredient in many of the shop compositions.

The other species of Teucrium are, 1. Of those called Teucria by authors, 1. The sinuated-leaved, shrubby, Bætic Teucrium. 2. The broader-leaved Teucrium. 3. The Teucrium, with inflated cups. 4. The perennial, supine, laciniated-leaved Teucrium. 5. The annual, laciniated-leaved Teucrium.

2. Of those called Polia by authors there are, 1. The lavender-leaved Polium. 2. The very narrow-leaved Polium. 3. The common yellow Polium. 4. The common white Polium. 5. The long-headed Polium. 6. The creeping Polium. 7. The erect, maritime Polium. 8. The procumbent, sea Polium. 9. The purple-flowered, hoary Polium. 10. The ground-ivy-leaved Polium. 11. The germander-leaved, purple Polium. 12. The short-headed Polium. 13. The rosemary-leaved Polium. 14. The shrubby, narrow-leaved Polium. 15. The erect, narrow-leaved Polium, with short heads. 16. The toad-flax-leaved Polium. 17. The little, procumbent, serrated-leaved Polium.

18. The

18. The gnaphalium-like Polium. 19. The broad-leaved, ſerrated Polium. 20. The ſerpyllum-leaved Polium. 21. The thyme-leaved, purple Polium, or Teucrium called Polium.

Of the Teucria, called Chamædrys by authors, there are, 1. The common, great Chamædrys. 2. The leſſer, creeping Chamædrys. 3. The hairy, Alpine Chamædrys. 4. The baum-leaved, ſhrubby Chamædrys. 5. The leſſer baum-leaved Chamædrys. 6. The Chamædrys, called common Teucrium. 7. The ſhrubby, Alpine, gloſſy-leaved Chamædrys. 8. The purple, Cretic, ſhrubby Chamædrys. 9. The fine-leaved, many-flowered Chamædrys. 10. The nettle-leaved Chamædrys. 11. The hoary, lanceolated-leaved, ſea Chamædrys. 12. The multifid-leaved Chamædrys. 13. The prickly, multifid-leaved Chamædrys. 14. The broad-leaved, oriental Chamædrys.

Of thoſe called Ajugæ by Rivinus, and by others Bugulæ, are, 1. The ſmooth Bugula. 2. The hairy-leaved Bugula. The flowers of both theſe are naturally blue, but they vary into all the degrees of red and white, and hence authors have made many imaginary ſpecies from the varieties of each.

Of the Teucria, called Chamæpitys by authors, are, 1. The ſerrated-leaved, ſcented Chamæpitys. 2. The common, or trifid-leaved Chamæpitys. 3. The large, red-flowered, trifid-leaved Chamæpitys.

SATUREIA.

THE calyx of the Satureia is erect, and the ſegments of the corolla are nearly equal; for the reſt ſee the claſſical character.

This genus comprehends the Satureia and the Thymbra of Tournefort and others.

1. *Satureia pedunculis bifloris.* **Summer Savory.**
The biflorous, peduncled Satureia.

The root is oblong, hard, and woody. The plant riſes to a foot high; the ſtalk is woody: the leaves are near an inch long, very narrow, and ſomewhat hairy. The flowers ſtand in the alæ of the leaves, two on each peduncle; they are ſmall and whitiſh; the ſeeds are brown.

It is a native of the ſouth of France; we have it in our gardens. C. Bauhine calls it, Satureia hortenſis.

It is a carminative, and is kept as ſuch in the ſhops.

2. *Satureia pedunculis dichotomis.* **Winter Savory.**
The Satureia, with dichotomous peduncles.

The root is fibrous: the plant grows to a foot high: the ſtalks are woody and ramoſe; the leaves thick-ſet, very narrow, and of a bright green colour: the flowers are moderately large and white, with a bluſh of red.

It is a native of the ſouth of France. C. Bauhine calls it, Satureia durior.

It is uſed in ſauces.

The other ſpecies of Satureia are all called Thymbræ: they are, 1. The Cretic Satureia, or legitimate Thymbra of authors. 2. The marjoram-leaved Thymbra, called common Marum. 3. The round-leaved, Spaniſh Thymbra. 4. The coris-leaved, Spaniſh Thymbra. 5. The ſpiked Thymbra.

LAVANDULA.

THE calyx is of an ovated figure, very ſlightly dentated at the rim, and ſupported by a ſquamma. For the reſt ſee the claſſical character.

Lavandula foliis duplicato-pinnatifidis. **Jagged-leaved Lavender.**
The duplicately pinnatifid-leaved Lavender.

The root is hard, woody, oblong, and divaricated: the plant riſes to a foot and a half high: the ſtalks are robuſt, ſquare, and hairy; the leaves are finely divided into narrow ſegments, hoary, and very fragrant: the flowers are ſmall and blue; they ſtand in a ſpike, like thoſe of Lavender, at the top of a naked ſtalk.

It is common in our gardens. C. Bauhine calls it, Lavandula folio diſſecto; J. Bauhine, Lavandula multifido folio.

The other ſpecies of Lavandula are, 1. The common Lavender of our gardens. 2. The Arabian Stæchas. 3. The broad-leaved Lavender. 4. The ſhort-ſpiked, broad-leaved Lavender. 5. The oblong and ſerrated-leaved Lavender. 6. The ſhrubby, broad, crenated-leaved Lavender.

All the ſpecies are good in medicine as cephalics and cordials.

HYSSOPUS.

THE lower lip of the corolla has the intermediate ſegment crenated: the ſtamina are erect and diſtant. For the reſt ſee the claſſical character.

Hyſſopus caule acute quadrangulo glabro.

The acutely-quadrangular, ſmooth-ſtalked Hyſſopus.

The root is a tuft of white fibres: the plant grows to five feet high; the ſtalk is firm and green: the leaves ſtand on pedicles, and are of a cordated form, ſmooth, and ſharply ſerrated at their edges: the flowers are ſmall and yellow, and ſtand in a kind of ſquare ſpikes, at the tops of the branches.

It is a native of Virginia. Tournefort calls it, Sideritis altiſſima ſcrophulariæ folio, flore flaveſcente.

The other ſpecies are, 1. The common Hyſſop. 2. The Siberian, large, blue-flowered Hyſſop. 3. The laciniated-leaved Hyſſop. 4. The myrtle-leaved Hyſſop. 5. The tall, hairy Hyſſop.

NEPETA.

THE middle ſegment of the lower lip of the corolla is crenated: the ſtamina ſtand cloſe to one another. For the reſt ſee the claſſical character.

Nepeta foliis ſeſſilibus, nudis, calycibus fructus ovatis æqualibus.

The naked, ſeſſile-leaved Nepeta, with the cups in ſeed oval and equal.

Tall, white Sideritis.

The root is oblong and fibrated: the plant grows to five feet high: the ſtalks are ſquare, hairy, and ramoſe; the leaves are two inches and a half long, an inch and a half broad, ſerrated, terminating in a point, and of a deep green colour on the upper ſurface, and hoary underneath: the flowers are large, and of a pale red; they are diſpoſed in a kind of ſpikes.

It is a native of Spain. J. Bauhine calls it, Mentha cataria Hiſpanica, olim Sideritis altiſſima flore albo.

The other ſpecies are, 1. The common, hoary Nepeta. 2. The interruptedly-ſpicate Nepeta. 3. The veronica-leaved Nepeta. 4. The common, leſſer Nepeta. 5. The narrow-leaved Nepeta. 6. The tuberous-rooted, betony-leaved Nepeta. 7. The leſſer, fibroſe-rooted, betony-leaved Nepeta.

BETONICA.

THE calyx is ariſtated: the upper lip of the corolla is plane and emarginated: the tube is cylindric. For the reſt ſee the claſſical character.

Betonica ſpicata corollis majoribus.

The ſpiked Betonica, with larger corollæ.

Common, Wood Betony.

The root is thick, tuberous, and fibrated; the leaves ſtand on long pedicles, and are hairy, of a blackiſh-green colour, and crenated round the edges: the ſtalks are ſquare, and a foot high; the flowers of a bright red colour, and diſpoſed in ſhort ſpikes.

It

It is common in our woods. C. Bauhine calls it, Betonica purpurea.
It is a famous cephalic.

The other ſpecies of Betonica are, 1. The taller, narrower-leaved, white-flowered Betonica. 2. The great, broad-leaved, yellow, hairy Betonica. 3. The yellowiſh, white-flowered Betonica, called ſmooth Sideritis. 4. The yellow, ſage-leaved, ſea Betonica.

SIDERITIS.

THE lower lip of the corolla is trilobous and undivided: the calyx is ariſtated. The reſt ſee in the claſſical character.

Sideritis foliis ovato-prælongis ſuperne crenatis.
The oblong, oval-leaved Sideritis, crenated in the upper part.

The root is oblong, woody, and divaricated; the ſtalks are procumbent, ſix or eight inches long, ſquare, whitiſh, and hoary: the leaves ſtand in pairs; they are oblong, moderately broad, and crenated toward their extremities: the flowers are ſmall, and of a whitiſh-red colour; they ſtand in cluſters, round the tops of the ſtalks.

It is a native of France. C. Bauhine calls it, Sideritis hirſuta procumbens.

The other ſpecies are, 1. The procumbent Sideritis, with undivided leaves. 2. The Sideritis, with deeply-divided leaves. 3. The hyſſop-leaved, Alpine Sideritis. 4. The narrow-leaved, Spaniſh Sideritis, called Tragoriganum. 5. The narrow-leaved, crenated Sideritis. 6. The ſhrubby, Spaniſh Sideritis. 7. The trifid-leaved Sideritis. 8. The procumbent, hyſſop-leaved Sideritis. 9. The Sideritis, called Marrubiaſtrum vulgare, and Alſine triffaginis folio. 10. The Sideritis, called the motherwort-leaved Marrubiaſtrum.

MENTHA.

THE corolla is nearly equal, and divided into four ſegments; the broader ſegment is emarginated. For the reſt ſee the claſſical character.

This genus comprehends the Mentha, Menthaſtrum, and Pulegium of authors.

Mentha floribus ſpicatis, foliis oblongis ſerratis. **Long-leaved Horſemint.**
The ſpiked-flowered Mentha, with long, ſerrated leaves.

The root is white and creeping: the plant grows to two or three feet high: the ſtalk is ſquare, robuſt, and ramoſe; the leaves are two inches and a half long, narrow, ſharply ſerrated at the edges, and of a greyiſh-green colour: the flowers are ſmall, and of a whitiſh-red colour; they ſtand in long ſpikes, at the tops of the branches.

It grows with us in wet places. C. Bauhine calls it, Mentha ſylveſtris folio longiore; others, Menthaſtrum ſpicatum longifolium.

The other ſpecies of Mentha are, 1. The round-leaved Mentha. 2. The large, purple-flowered, round-leaved Mentha. 3. The verticillate, roundiſh-leaved Mentha. 4. The garden, Baſil Mentha. 5. The curled, roundiſh-leaved, ſpiked, garden Mentha. 6. The great, curled-leaved, Daniſh Mentha. 7. The round-leaved, water Mentha. 8. The round, rough-leaved, ſpiked Mentha. 9. The hairy, verticillate, field Mentha. 10. The narrow-leaved, ſpiked Mentha. 11. The ſhort-ſpiked, pepper Mentha. 12. The broad-ſpiked, long-leaved, water Mentha.

Of thoſe called by authors Pulegium there are, 1. The common Pennyroyal. 2. The ſmall, hoary Pennyroyal. 3. The narrow-leaved Pennyroyal. 4. The broad-leaved Pennyroyal.

GLECHOMA.

THE two pairs of the antheræ, ſeparately, are arranged in form of croſſes.

Glechoma foliis reniformibus crenatis. Ground Ivy.
The Glechoma, with kidney-shaped, crenated leaves.

The root is fibrous; the stalks are square, procumbent, and jointed; the leaves are roundish, of a dusky green, hairy, and crenated about the edges: the flowers are moderately large, and of a beautiful blue.

It is common under our hedges. C. Bauhine calls it, Hedera terrestris vulgaris.

It varies in the size and figure of the leaves, and colour of the flowers, and has hence been divided by authors into several imaginary species.

ORVALA.

THE upper lip of the corolla is divided into three lobes, each of which is terminated by three points: the lower lip is cordated and crenated.

This genus comprehends the Papia of Micheli. There is but one known species of it.

ORVALA.

The root is fibrous; the stalk is robust, and three feet high: the leaves stand in pairs; they have long pedicles; they are two inches and a half long, an inch and a half broad near the base, deeply laciniated at the edges, and terminate in a sharp point: the flowers are large and purple, and stand in clusters at the joints of the stalks.

It is a native of Italy.

AJUGA.

THE upper lip of the corolla is extreamly small; for the rest, see the classical character. This genus comprehends the Bugula of authors.

Ajuga tetragono-pyramidalis. Hairy Bugle.
The tetragonously-pyramidal Ajuga.

The root is fibrous and white; the stalk is square and hairy; the plant grows to a foot and a half high: the leaves stand on long pedicles; they are three inches long, narrow, lightly hairy, and crenated: the flowers are blue, and stand in a lax spike.

It is a native of France and Italy. J. Bauhine calls it, Consolida media Genevensis.

The other species are, 1. The common Bugle. 2. The great Alpine Bugle.

LAMIUM.

THE upper lip of the corolla is undivided, and forms a kind of arch: the lower lip is divided into two lobes: the opening has on each side a dentated edge.

This genus comprehends the Lamium of Tournefort, and the Galeopsis of Rivinus.

Lamium foliis floralibus sessilibus amplexicaulibus obtusis.
The Lamium, with the floral leaves sessile, and surrounding the stalks.

The root is fibrous and white; the stalks are square, weak, six or eight inches long, and hollow: the lower leaves have pedicles; they are crenated and pointed; those on the upper part of the stalks meet, and surround it; the flowers grow from the alæ of these, and are moderately large, and of a pale red.

It is common in our ploughed fields. C. Bauhine calls it, Lamium folio caulem ambiente.

The other species are, 1. The roundish-leaved, purple-flowered Lamium, called Galeopsis. 2. The lesser, roundish-leaved Galeopsis. 3. The oblong-leaved, red-flowered Lamium. 4. The common, white Lamium. 5. The Lamium, with blotched leaves. 6. The pellitory of the wall-leaved Lamium. 7. The purple Lamium, with finely divided leaves. 8. The common, little, red Lamium.

GALEOPSIS.

GALEOPSIS.

THE upper lip of the corolla is crenated and arched: the lower lip is bidentated in it's upper part: the calyx is aristated.
This genus includes the Cannabis Spuria of Rivinus, and the Tetrahit of Dillenius.

Galeopsis ramis summis strigosis. **Hemp-leaved Dead-nettle.**
The Galeopsis, with the tops of the branches strigose.

The root is fibrous and white; the plant rises to three feet high: the stalk is square, hollow, and ramose: the leaves are two inches long, narrow, hairy, and serrated: the flowers are moderately large, and of a pale red; their cups are prickly.
It is common in our corn-fields. C. Bauhine calls it, Urtica aculeata foliis serratis; others, Cannabis spuria.
The other species are, 1. The yellow-flowered, hemp-leaved Galeopsis. 2. The narrow-leaved Galeopsis, with variegated flowers. 3. The purple, spreading, field Galeopsis, called Ladanum segetum, and Sideritis rubra. 4. The betony-leaved Galeopsis. 5. The oblong-leaved, yellow-flowered Galeopsis, called yellow Dead-nettle. 6. The larger-leaved, yellow Galeopsis. 7. The rounder-leaved Galeopsis. 8. The teucrium-leaved, shrubby Galeopsis.

STACHYS.

THE upper lip of the corolla is arched: the lower lip is reflex, divided into three segments; the middle one largest, reflex, and emarginated.
This genus comprehends some of the Galeopsides of Tournefort.

Stachys foliis oblongo-cordatis, floribus verticillatis. **Base Hoar-hound.**
The oblongo cordated-leaved Stachys, with verticillate flowers.

The root is thick, tuberous, and fibrated; the plant rises to two feet high: the stalk is square, robust, and hoary: the leaves are oblong, crenated, and hoary: the flowers grow in clusters round the stalk, at the upper joints, in such manner as to form a kind of spike; they are moderately large and red.
It is a native of Germany and France. C. Bauhine calls it, Stachys major Germanica.
The other species are, 1. The betony-leaved Stachys, with variegated flowers. 2. The broad-leaved, smooth, field Stachys. 3. The great-spiked, stinking Stachys. 4. The marsh Stachys, with betony leaves.

BALLOTA.

THE calyx is of a hypocrateriform shape, with five indentings at the end, and marked with ten striæ: the upper lip of the corolla is crenated.
Of this genus there is but one known species.

BALLOTA.

The root is fibrous; the plant rises to three feet high; the stalks are square, thick, and hairy: the leaves are of a somewhat cordated form, an inch and a half long, and near as much in breadth at the base; of a dusky green, and crenated: the flowers are red, and stand in round clusters at the joints of the stalks.
It is common by way-sides. C. Bauhine calls it, Marrubium nigrum fœtidum; others, Ballota.

MARRUBIUM.

THE calyx is of a hypocrateriform ſhape, divided into ten parts at the end, and marked with ten ſtriæ: the upper lip of the corolla is bifid and linear.

This genus comprehends the Marrubium of Tournefort, and the Pſeudo-dictamnus of Rivinus.

Marrubium foliis cordatis, caule fruticoſo. Baſtard Dittany.
The cordated-leaved, ſhrubby-ſtalked Marrubium.

The root is hard, oblong, and brachiated; the plant riſes to a foot and half high: the ſtalks are numerous, ſquare, and hoary; the leaves are three quarters of an inch in diameter, roundiſh, thick, whitiſh, and hoary, much reſembling thoſe of the Dittany of Crete: the flowers are purple, and ſtand in round cluſters at the joints of the ſtalk.

It is a native of Crete. C. Bauhine calls it, Pſeudo-dictamnus inodorus.

The other ſpecies are, 1. The common, white Marrubium. 2. The rounder-leaved, white Marrubium. 3. The great, broader-leaved Marrubium. 4. The hairy Marrubium. 5. The narrow-leaved Marrubium. 6. The ſtellated and aculeated, cupped Marrubium. 7. The procumbent, ſilvery-leaved Marrubium. 8. The Molucca-cupped Marrubium. 9. The curled and rugoſe-leaved Marrubium. 10. The great, white-leaved Marrubium. 11. The great, blackiſh, and hairy-leaved Marrubicum. 12. The ſcrophularia-leaved Marrubium. 13. The ground-ivy-leaved Marrubium. The ſix laſt are called, by authors, Pſeudo-dictamni.

LEONURUS.

THE calyx is of a cylindric figure, ſtriated, and terminated by patulous denticulations: the upper lip of the corolla is erect and barbated; the involucrum ſetaceous.

This genus comprehends the Leonurus and Cardiaca of Tournefort, and the Galeobdolon of Dillenius.

Leonurus foliis tripartitis multifidis linearibus obtuſiuſculis. Ruſſian Motherwort.
The Leonurus, with tripartite, multifid, linear, obtuſe leaves.

The root is creeping and fibrated; the ſtalks are numerous, ſquare, hairy, and two feet high: the leaves are ſomewhat like thoſe of the coronopus, divided into three principal parts, and from theſe into others; they are of a bright green on the upper ſurface, and whitiſh underneath: the flowers ſtand in thick cluſters at the joints of the ſtalk; they are ſmall and red.

It is a native of Ruſſia. Amman calls it, Ballote inodora foliis Coronopi.

The other ſpecies of Leonurus are, 1. The common Cardiaca. 2. The ſmooth-leaved, finely-divided Cardiaca. 3. The great, purple-flowered, ſideritis-leaved Leonurus. 4. The ſmaller-flowered, catamint-leaved Leonurus. 5. The origanum-leaved Leonurus.

PHLOMIS.

THE calyx has five folds or plicæ, and is marked with ten ſtriæ: the upper lip of the corolla is incumbent and hairy; the involucrum is foliaceous.

Phlomis foliis cordatis villoſis, caule fruticoſo. Sage Mullein.
The ſhrubby-ſtalked, cordated, hairy-leaved Phlomis.

The root is woody and fibrated; the ſtalks are numerous, woody, ſquare, and whitiſh: the leaves are very hoary and white, like thoſe of ſage, but larger: the flow-

ers ſtand in round cluſters about the upper parts of the ſtalks; they are large and yellow.

It is a native of Spain. C. Bauhine calls it, Verbaſcum latis ſalviæ foliis.

The other ſpecies of Phlomis are, 1. The little, purple-flowered Phlomis. 2. The ſmooth, nettle-leaved Phlomis; theſe are both Ruſſian. 3. The narrower-leaved, yellow Phlomis. 4. The round-leaved, purple, ſhrubby Phlomis. 5. The pointed-leaved, purple, ſhrubby Phlomis. 6. The purple, clary-leaved Phlomis. 7. The very white, ſhrubby, Spaniſh Phlomis. 8. The very white, herbaceous Phlomis.

MOLUCCELLA.

THE calyx is of a campanulated figure, and is larger than the corolla.

Moluccella calycibus ſeptem dentatis. **Prickly Molucca.**
The Moluccella, with cups indented in ſeven places.

The root is fibrous; the ſtalks are numerous, ſquare, a foot and half high, and ramoſe: the leaves are of a roundiſh figure; they ſtand on long pedicles, and are jagged at the edges: the flowers are red, and ſtand in cluſters in large cups.

It is a native of the Molucca's. C. Bauhine calls it, Meliſſa Moluccana fœtida.

The other ſpecies are, 1. The ſweeter-ſcented, ſmooth-cupped Molucca. 2. The ſhrubby, Sicilian Molucca.

Claſs the Fourteenth. Order the Firſt.

Diviſion the Second.

Dydinamia Gymnoſpermia, with bilabiated cups.

OCYMUM.

ONE of the two lips of the cup is divided into four ſegments, the other into two. One of the lips of the flower is divided into four ſegments, the other is undivided.

Ocymum foliis ovatis glabris. **Great Baſil.**
The ſmooth, oval-leaved Ocymum.

The root is fibrous; the plant riſes to a foot high, or more: the ſtalk is green and tender: the leaves ſtand on pedicles, and are oblong, broad, and of a pale green: the flowers are white, or reddiſh, and are moderately large; they ſtand in cluſters round the tops of the ſtalks, ſo as to form a kind of ſpike.

It is a native of Ceylon, but is frequent in our gardens. C. Bauhine calls it, Ocymum caryophyllatum majus.

The other ſpecies are, 1. The little, oval-leaved Ocymum. 2. The great, fimbriated-leaved Ocymum. 3. The green, oblong, leaved Ocymum. 4. The blackiſh-leaved, rue Ocymum. 5. The citron Ocymum. 6. The aniſe Ocymum. 7. The ſhort-ſpiked Ocymum. 8. The narrow, ſerrated-leaved Ocymum. 9. The narrow, bullated-leaved Ocymum.

TRICHOSTEMA.

THE upper lip of the corolla is falcated; the ſtamina are extremely long.

It is a native of North America, deſcribed by Gronovius, in his Flora Virginica. The characters diſtinguiſh it ſufficiently, without a deſcription.

THYMUS.

THE mouth or opening of the calyx is closed up with hairs. For the rest, see the classical character.

This genus comprehends the Thymus, Serpyllum, and Acinos of many authors.

Thymus verticillis lanuginosis, dentibus calycinis setaceis pilosis.
The Thymus, with woolly verticils, and the denticles of the cup hairy.

Herb Mastic.

The root is oblong, woody, and fibrated; the plant grows to a foot and half high: the stalks are woody, ramose, and durable: the leaves are very small, and resemble those of common Thyme: the flowers are small and white, and are placed in thick clusters around the tops of the stalks.

It is a native of Spain. C. Bauhine calls it, Sampsuchus sive Marum mastichen redolens.

The other species of Thymus are, 1. The common, garden Thyme. 2. The broader-leaved Thyme. 3. The capitated, Cretic Thyme. 4. The procumbent Thyme. 5. The capillaceous, hairy-leaved Thyme, with great heads. 6. The dittany-headed Thyme. 7. The smooth, glossy-leaved, sea Thyme. 8. The long-leaved, autumnal, headed Thyme. 9. The broad-leaved, hairy Thyme. 10. The common, wild Thyme. 11. The great-flowered, wild Thyme. 12. The hoary-headed, wild Thyme. 13. The lemon-scented, wild Thyme. 14. The smooth, narrow-leaved Thyme. 15. The hairy, narrow-leaved, wild Thyme. 16. The short-leaved, wild Thyme, called creeping Marum.

MELISSA.

THE calyx is of a subcampanulated figure; the upper lip of the corolla is arched, and divided into two parts: the lower lip is divided into three segments, and the middle one is cordated. The rest see in the classical character.

This genus comprehends the Melissa and the Calamint of authors.

Melissa foliis oblongis rugosis hirsutis, corollis longiusculis.
The long-flowered Melissa, with rough, hairy leaves.

Baum-leaved Archangel.

The root is fibrous; the plant rises to a foot and half high: the stalks are square, hairy, jointed, and robust: the leaves are two inches long, an inch and half broad toward the base, rugose, and of a blackish-green: the flowers are long, pendent, and red; they stand three or four together in the alæ of every leaf.

It is a native of England, but is not common here. C. Bauhine calls it, Lamium montanum Melissæ folio.

The other species of Melissa are, of the Baum-kind, 1. The common, garden Melissa. 2. The strong-smelling, lightly-hairy Melissa. 3. The dwarf, broad-leaved, great-flowered Melissa. 4. The great-flowered, narrow-leaved Melissa. 5. The plantain-leaved Melissa.

Of the Calamint-kind there are, 1. The roundish, large-leaved Calamint. 2. The smaller-leaved, strong-smelling Calamint. 3. The tall, dentated-leaved Calamint. 4. The great-flowered Calamint. 5. The small-flowered Calamint. 6. The ocymum-leaved Calamint. 7. The savory-leaved Calamint. 8. The marum-leaved Calamint. 9. The thyme-leaved Calamint.

CLINOPODIUM.

THERE is an involucrum, with a multitude of hairs placed under the clusters of flowers. The rest of the parts see in the classical character.

Clinopodium

Clinopodium verticillis denſis, foliis ſubrotundis. Great, Wild Baſil.
The roundiſh-leaved, thick-cluſtered Clinopodium.

The root is oblong and oblique: the plant grows to a foot and half high; the ſtalks are ſquare, ſlender, and hairy: the leaves are ſmall and roundiſh; they are hairy, aud of a pale green: the flowers are oblong and red; they are placed at the joints of the the ſtalks in large tufts.

It is common in dry places. C. Bauhine calls it, Clinopodium origano ſimile.

The other ſpecies are, 1. The taller, large-leaved Clinopodium. 2. The low, ſmaller-leaved Clinopodium. 3. The baſil-like, field Clinopodium. 4. The aginos-leaved Clinopodium. 5. The ſpicated and verticillate Clinopodium. 6. The hyſſop-leaved Clinopodium.

ORIGANUM.

THE Origanum has a ſquare, ſpiked ſtrobilus, collecting the cups into a head.
This genus comprehends the Origanum and Majorana of Tournefort.

Origanum foliis ſubrotundis, ſpicis confertis glabris. Wild Mar-
The round-leaved Origanum, with ſmooth, confert ſpikes. joram.

The root is fibrous; the ſtalks are numerous, ſquare, rigid, and two feet high: the leaves are roundiſh, half an inch in diameter, and of a dark green; the ſpikes are of a purpliſh colour, and three quarters of an inch long.

It is frequent with us by road-ſides. C. Bauhine calls it, Origanum vulgare ſpontaneum.

The other ſpecies are, 1. The procumbent, hairy Origanum. 2. The ſmall-leaved, Cretic Origanum. 3. The Origanum onites. 4. The rounder-leaved, pot Marjoram, or the pennyroyal-leaved Origanum. 6. The broad-leaved, ſmooth, procumbent Origanum. 7. The woolly Origanum, called dittany of Crete. 8. The ſmall-headed Origanum. 9. The ſhrubby Origanum, with umbellated heads.

Of thoſe called Majorana there are, 1. The common, ſmall Marjoram. 2. The broader-leaved, hairy Origanum. 3. The rounder-leaved, ſcutellated Origanum. 4. The five-leaved Origanum.

DRACOCEPHALUM.

THE opening or mouth of the corolla is inflated, and the upper lip is hollow and longitudinally connivent.
This genus comprehends alſo the Moldavica and Pſeudo-meliſſa.

Dracocephalum floribus verticillatis, ſerraturis capillaceis. Turky
The verticillate-flowered Dracocephalum, with capillary Baum.
ſerratures.

The root is fibrous; the ſtalks are branched, ſquare, and rigid, a foot and half high: the leaves an inch an half long, and about half an inch broad, and finely ſerrated; they have the ſmell of Baum: the flowers are blue; they ſtand at the alæ of the leaves in cluſters.

It is a native of Turky. C. Bauhine calls it, Meliſſa peregrina folio oblongo.

The other ſpecies are, 1. The American Dracocephalum of Breynius. 2. The betony-leaved, blue-flowered Dracocephalon. 3. The trifoliate, ſcented Dracocephalum. 4. The ſpiked-flowered, ſmooth, whole-leaved, Ruſſian Dracocephalum. 5. The ſmall, germander-leaved Dracocephalum. 6. The verticillate Dracocephalum, with rounded bracteæ. 7. The betony-leaved Dracocephalum, with little, blue, pendulous flowers. 8. The very ſmall-flowered, blue Dracocephalum.

HORMI-

HORMINUM.

THE calyx is campanulated, and the upper lip of the corolla is hollow; for the reſt, ſee the claſſical character. Dillenius makes this but a ſpecies of Meliſſa, Hort. Elth. 2. 16; but the cup and upper lip of the corolla diſtinguiſh it from that, and all the other genera, ſo that it needs no farther deſcription.

MELITTIS.

THE upper lip of the calyx is emarginated: the upper lip of the corolla is plane; the lower one crenated. Rivinus has figured this, 1. 29. under the name of Meliſſophyllum. It needs no farther deſcription than this character.

CUNILA.

THE calyx is ariſtated, and the upper lip of the corolla is arched. This genus comprehends the Marrubiaſtrum of Tournefort. The reſt of it's parts ſee in the claſſical character.

Cunila calycis labio ſuperiore trifido, inferiore bipartito.
The Cunila, with the upper lip of the cup divided into three, the lower into two parts.

The root is yellowiſh, woody, and divaricated; the ſtalk is ſquare, hairy, and a foot and a half high: the leaves are oblong, of a whitiſh green, and hairy, and lightly ſerrated toward their extremity; the flowers are very minute, ſcarce appearing, except on a cloſe examination; they are variegated with purple, yellow, and white.

It is a native of Italy. C. Bauhine calls it, Sideritis montana parvo varioque flore.

The other ſpecies are, 1. The germander-leaved Cunila. 2. The prickly, cupped Cunila. 3. The baum-leaved Cunila.

BRUNELLA.

THE ſtamina are bifurcated, and only one of the two points has an anthera on it.

Brunella bracteis cordatis.
The Brunella, with heart-ſhaped bracteæ. **Self-heal.**

The root is fibrous; the ſtalks are ſquare, rigid, and ſix or eight inches high: the leaves an inch long, and half an inch, or more, broad, of a blackiſh-green: the flowers are blue, and ſtand in thick, ſhort ſpikes, at the top of the ſtalks.

It is common by way-ſides. C. Bauhine calls it, Brunella major folio non diſſecto; others, Brunella vulgaris.

This ſpecies varies greatly: it's flower is ſometimes larger than uſual; it's leaves are ſometimes auriculated, ſometimes deeply crenated, and ſometimes diſſected finely. C. Bauhine and others have made four diſtinct ſpecies of theſe varieties; and others have greatly farther increaſed the number, by adding the variations of the flowers into red, white, &c.

The other really diſtinct ſpecies are, 1. The great, broad-leaved Brunella. 2. The hyſſop-leaved Brunella.

SCUTELLARIA.

THE mouth of the calyx is originally open; but, after the flower is fallen, it becomes ſhut up, as it were, with an operculum.

This genus comprehends the Caſſida of Tournefort.

Scutellaria foliis ſubcordatis ſerratis, ſpica interrupta.
The ſubcordate, ſerrated-leaved Scutellaria, with an interrupted ſpike.

The root is oblong and oblique; the ſtalks are ſquare, rigid, and a foot and a half high: the leaves are an inch and a half long, an inch broad, ſerrated and hairy: the flowers ſtand in long, looſe ſpikes; they are large and purple.

It is a native of Italy. Columna calls it, Caſſida; C. Bauhine, Lamium peregrinum ſive Scutellaria.

The other ſpecies are, 1. The procumbent, great-flowered Scutellaria. 2. The tall, American Scutellaria. 3. The common, blue-flowered Scutellaria. 4. The little, purple-flowered Scutellaria. 5. The mallow-leaved Scutellaria. 6. The baum-leaved Scutellaria. 7. The origanum-leaved Scutellaria.

PRASIUM.

THE fruit conſiſts of four berries, each containing a ſingle ſeed. The reſt ſee in the claſſical character.

Praſium foliis ovato-oblongis ſerratis.
The Praſium, with oblong, oval, ſerrated leaves.

The root is oblong, divaricated, and fibrated: the ſtalks are as thick as a gooſe-quill, round, but ridged, ſo as to appear ſquare; they grow to two feet high: the leaves are green all the winter; they are oblong and ſerrated; the flowers are moderately large and white, variegated with ſtreaks of yellow; they ſtand in the alæ of the leaves toward the tops of the ſtalks.

It is a native of Sicily and Crete. Moriſon calls it, Meliſſa fruticoſa teucrii facie.

Claſs the Fourteenth. Order the Second.

DIDYNAMIA ANGIOSPERMIA.

Plants with two effective ſtamina and with the ſeeds incloſed in capſules.

Diviſion the Firſt.

Such as have ſimple ſtigmata and perſonated corollæ.

BARTSIA.

THE calyx is divided into two lobes, and is emarginated and coloured: the corolla is leſs coloured than the calyx; the upper lip of it is the longer. The reſt of the parts ſee in the claſſical character. Theſe ſufficiently diſtinguiſh the Bartſia from all the other genera, even without any farther deſcription.

RHINANTHUS.

THE calyx is divided into four parts, and is ventricoſe: the capſule is obtuſe and compreſſed. This genus comprehends the Criſta galli, the Elephas, and ſome of the Pediculares of Tournefort.

Rhinanthus corollæ labio ſuperiore breviore. Yellow
The Rhinanthus, with the upper lip of the corolla ſhorter. Rattle.

The root is oblong, ſlender, and woody; the ſtalk is round, rigid, and firm, and grows to a foot high: the leaves are oblong, crenated, and of a dark green; the flowers are numerous, ſmall, and yellow; they ſtand in long ſeries.

It is common in our meadows every-where. C. Bauhine calls it, Pedicularis pratenſis lutea, ſive Criſta galli.

The other ſpecies are, 1. The taller Rhinanthus, with hairy cups. 2. The ſpicated, pale-flowered Rhinanthus. 3. The viſcous, ſerrated-leaved Rhinanthus. 4. The umbellated, yellow Rhinanthus. 5. The narrow-leaved Rhinanthus. 6. The oblong, ſerrated-leaved Rhinanthus. 7. The great-flowered Elephas, with an erect trunk. 8. The ſmall-flowered Elephas, with an erect trunk. 9. The crooked-trunked Elephas.

EUPHRASIA.

THE calyx is cylindric, and divided into four ſegments; the capſule is of an oblong, oval figure.

This genus comprehends the Euphraſia of Tournefort, and the Odontites of Dillenius.

Euphraſia foliis ovatis acute dentatis. **Common Eyebright.**
The acutely-dentated, oval-leaved Euphraſia.

The root is white, oblong, and ſlender: the ſtalk is round, thick, rigid, brown, and ſix or eight inches high: the leaves are half an inch long, oval, of a bluiſh-green colour, and dentated: the flowers ſtand all along the tops of the ſtalks; they are white, and very beautiful, though ſmall.

The plant is common in our meadows. C. Bauhine calls it, Euphraſia vulgaris.

The other ſpecies are, 1. The taller and more ramoſe Euphraſia. 2. The blue-flowered, tall, ſimple-ſtalked Euphraſia. 3. The little, yellow, Alpine Euphraſia. 4. The Euphraſia with finely-divided leaves. 5. The lanceolated, ſerrated-leaved Euphraſia.

MELAMPYRUM.

THE calyx is divided into four parts: the upper lip of the corolla is compreſſed, and it's edge bent back: the capſule is oblique, and opens on one ſide.

Melampyrum ſpicis conicis, laxis, laceris. **Purple-eared Cow-wheat.**
The Melampyrum, with conic, lax, lacerated ſpikes.

The root is oblong, ſmall, and woody: the ſtalks are hairy, of a purpliſh colour, and ſquare: the leaves are broad, oblong, and deeply laciniated; thoſe toward the lower part of the ſtalk narrower, thoſe about the top ſhort, broad, and purpliſh: the flowers ſtand among theſe, and form a kind of ſpike; they are variegated with yellow and purple.

It is very common in the corn-fields of France, Spain, and Germany. C. Bauhine calls it, Melampyrum purpuraſcente coma; J. Bauhine, Triticum vaccinium.

The other ſpecies are, 1. The broad-leaved, yellow Melampyrum. 2. The purple and white-flowered, creſted Melampyrum. 3. The narrower-leaved Melampyrum. 4. The ſmaller-leaved, larger-flowered Melampyrum.

LATHRÆA.

THE calyx is divided into four parts, and there is an emarginated, depreſſed gland at the baſe of the future of the germen.

This genus comprehends the Clandeſtina, Phelypæa and Squammaria, or Anblatum, of Tournefort. Linnæus has, indeed, ſeparated theſe into three genera, in his Genera Plantarum, but he has ſince found they are all but one genus.

Lathræa caule ſimpliciſſimo, corollis nutantibus, labio inferiore trifido. Great Toothwort.
The ſimple-ſtalked, nodding-flowered Lathræa, with the lower lip trifid.

The root is white, tender, and ſucculent, variouſly divaricated, and formed of a beautiful arrangement of ſcales: the ſtalk is five or ſix inches high, as thick as one's little finger, tender, ſucculent, brittle, and ſurrounded by a thin ſkin; there are membranes, reſembling leaves, on the lower part of it, and, on the upper, there is placed a ſeries of large, duſky-coloured flowers, all hanging on one ſide.

It is found in dark, ſhadowy lanes. C. Bauhine calls it, Orobanche radice dentata major.

The other ſpecies of Lathræa are, 1. The blue, cluſtered-flowered, cordated-leaved Lathræa. 2. The oblong-leaved Lathræa; and, 3. The low, ſmaller-flowered Lathræa.

SWALBEA.

THE calyx is divided into four ſegments; the upper ſegment is very ſmall, the lower one is large and emarginated.

It is an American, deſcribed by Gronovius, in his Flora Virginica, 71. The diviſion of the cup ſufficiently diſtinguiſhes it, without a deſcription.

PEDICULARIS.

THE calyx is divided into five parts; the capſule is mucronated and oblique.

Pedicularis caule ramoſo, floribus ſolitariis, calycibus quinquefidis crenatis. Red Rattle.
The ramoſe, ſingle-flowered Pedicularis, with crenated cups.

The root is fibrated and white: the ſtalks are round, procumbent, and of a purpliſh colour; the leaves are finely divided, and of a deep green colour: the flowers ſtand towards the extremities of the ſtalks; they are ſmall, and of a bright red colour.

The plant is frequent in our meadows. C. Bauhine calls it, Pedicularis rubra vulgaris.

The other ſpecies are, 1. The taller, erect Pedicularis. 2. The ſhort, obtuſe-leaved Pedicularis. 3. The teucrium-leaved, red, ſpiked Pedicularis. 4. The narrow-leaved Pedicularis. 5. The fern-leaved Pedicularis. 6. The tuberous-rooted Pedicularis. 7. The finely-divided-leaved Pedicularis.

TOZZIA.

THE calyx is divided into five parts at the extremity; the capſule is globoſe and unilocular.

Of this genus there is but one known ſpecies.

TOZZIA.

The root is oblong, moderately thick, ſquammated, and furniſhed with a great number of fibres at the bottom: the ſtalk is ſquare, and a foot high: the leaves are oval; they ſtand in pairs, and are ſlightly crenated, and have no pedicles: the flowers grow ſingly, from the alæ of the leaves, on ſhort pedicles; they are ſmall and yellow.

It is a native of Italy. Micheli has figured it under the name of Tozzia.

CHELONE.

THE calyx is divided into five parts: there is the rudiment of a fifth ſtamen between the upper ones.

It

It is a native of North America. Gronovius has described it in his Fl. Virg. 71: the rudiment of the fifth ſtamen, however, ſufficiently diſtinguiſhes it, without any farther deſcription.

GESNERIA.

THE calyx is divided into five ſegments, and ſituated on the germen: the corolla is crooked.

It is a native of America, deſcribed by Plumier, 9. The characters of the calyx and corolla ſufficiently diſtinguiſh it, without any farther deſcription.

GERARDIA.

THE calyx is divided into five ſegments; the corolla has two lips; the lower lip is divided into three emarginated lobes, the middle one is alſo bifid.

This alſo is an American, deſcribed by Plumier, 9. The characters here delivered will diſtinguiſh it from all the others of this claſs, without any farther deſcription.

ANTIRRHINUM.

THE calyx is compoſed of five leaves: the baſe of the corolla protuberates downwards, and contains a honey-like juice.

This genus comprehends the Antirrhinum, Linaria, Aſarina, Cymbalaria, and Elatine of authors.

1. *Antirrhinum corollis acaudatis, calycibus breviſſimis.*
The very ſhort, cupped Antirrhinum, with no tails to the flowers. — **Great Snapdragon.**

The root is white, oblong, and woody; the ſtalks are numerous, round, rigid, and two feet high: the leaves are an inch and a half long, very narrow, and placed cloſely on the ſtalk: the flowers are large, and of a pale red colour; they ſtand in a kind of ſpikes, at the tops of the ſtalks.

It is a native of France, C. Bauhine calls it, Antirrhinum majus folio longiore; it is common in our gardens.

2. *Antirrhinum foliis ternis ovatis.*
The ternate, oval-leaved Antirrhinum. — **Spaniſh Toad-flax.**

The root is white, oblong, and thick: the ſtalks are numerous, a foot high, round, and thick: the leaves ſtand three at a joint, and are broad, ſhort, and ſurround the ſtalk at the baſe; they are of a bluiſh-green colour, and flattiſh; the flowers are purple and yellow.

It is a native of Spain. C. Bauhine calls it, Linaria triphyllos minor lutea; others, Linaria Valentina.

3. *Antirrhinum caule flaccido, foliis cordatis quinquelobiis.*
The weak-ſtalked Antirrhinum, with cordated, quinquelobate leaves. — **Cymbalaria.**

The root is fibrous; the ſtalks are round, ſlender, weak, and trailing: the leaves are half an inch broad, of a dark green colour, and divided into five parts: the flowers ſtand on ſingle, tortuous pedicles, ariſing from the alæ of the leaves; they are ſmall, purple in colour, and have a ſpur behind.

It is a native of Italy, but grows on the walls of the Thames about London, from the refuſe of gardens. C. Bauhine calls it, Cymbalaria.

The other ſpecies of this genus are very numerous, and have been rendered much more ſo by authors, who have miſtaken varieties for ſpecies. The Aſarina of authors is but one ſpecies, properly called the round-leaved Antirrhinum.

Thoſe called Antirrhinum by authors are, 1. The common, field Antirrhinum. 2. The little, field Antirrhinum. 3. The yellow Antirrhinum. 4. The broad-leaved, great-

great-flowered Antirrhinum. 5. The hairy, origanum-leaved Antirrhinum. 6. The red valerian-leaved Antirrhinum. 7. The tall, narrow-leaved, Spaniſh Antirrhinum. 8. The graſſy-leaved, ſmall-flowered Antirrhinum.

Thoſe called Linariæ are, 1. The broad-leaved, Portugal Linaria. 2. The great-flowered, broad-leaved Linaria. 3. The blue-flowered, three-leaved Linaria. 4. The larger three-leaved Linaria. 5. The daiſy-leaved Linaria. 6. The moneywort-leaved Linaria. 7. The auriculated-leaved Linaria: theſe are called male and female Elatine. 8. The hairy, yellow Linaria. 9. The ſerpyllum-leaved Linaria. 10. The polygonum-leaved Linaria. 11. The hairy, ternate-leaved Linaria. 12. The polygala-leaved Linaria. 13. The broad-leaved, procumbent Linaria. 14. The common, yellow Linaria. 15. The narrow-leaved, purple and yellow-flowered Linaria. 16. The great, purple, ſweet Linaria. 17. The ſweet, capillary-leaved Linaria. 18. The narrow, hoary-leaved Linaria. 19. The little, yellow-flowered Linaria. 20. The blue, field Linaria. 21. The four-leaved, yellow Linaria. 22. The little-flowered, fleſhy-leaved, procumbent Linaria. 23. The blue, creeping Linaria. 24. The procumbent, four-leaved Linaria. 25. The mollugo-leaved Linaria. 26. The viſcous, hairy, ſea Linaria. 27. The long-tailed-flowered, narrow-leaved Linaria. 28. The thyme-leaved Linaria.

CYMBARIA.

THE calyx is divided into a great number of linear ſegments: the reſt ſee in the claſſical character.

Of this genus there is but one known ſpecies.

CYMBARIA.

The root is brown, woody, and creeping: the ſtalks are ſlender, round, and five or ſix inches high: the leaves are oblong, narrow, and very ſharp-pointed: the flowers are very large, and yellow; they grow on ſhort pedicles, from the alæ of the leaves: the leaves grow ſometimes ſingly, ſometimes two together.

The plant is a native of Ruſſia.

Claſs the Fourteenth. Order the Second.

Diviſion the Second.

Didynamia Angioſpermia, with the ſtigma ſimple and the corolla patulous.

LINNÆA.

THE calyx is double; that of the fruit is compoſed of two leaves, that of the corolla is divided into five ſegments, and ſtands upon the fruit: the corolla is campanulated. Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

CRANIOLARIA.

THE calyx of the flower is double: the perianthium is compoſed of four leaves; the ſpatha of one leaf.

It is an American, deſcribed by Houſton as a ſpecies of Martynia, but the characters given here ſufficiently diſtinguiſh it from that and every other genus.

ÆGINETIA.

THE ſpatha is formed of a ſingle valve: the baſe of the corolla is globoſe; the ſtigma is alſo globoſe, and reflex.

It is an Aſiatic, deſcribed in the Hortus Mal. 11. 7.

HEBENSTRETIA.

THE calyx is formed into two labia, of which the lower one is the longeſt: the corolla has only one lip, which is aſcendent, and divided into four ſegments: the capſule contains two ſeeds.

It is an Aſiatic. The characters ſufficiently diſtinguiſh it.

CRESCENTIA.

THE calyx is divided into two equal parts: the corolla is gibbous; the fruit is a berry on a ſhort pedicle, containing a ſingle cell, and in it many ſeeds.

It is an American, deſcribed by Plumier, 16. The characters ſufficiently diſtinguiſh it.

HALLERIA.

THE calyx is divided into three ſegments; the corolla into four: the ſtamina are longer than the corolla; and the fruit is a berry containing two cells.

LANTANA.

THE calyx is lightly divided at the extremity into four parts: the ſtigma is uncinated and broken.

This genus comprehends the Camara, Mirobatindum, and Pſeudo-viburnum of authors.

Lantana foliis oppoſitis, caule inermi, ſpicis oblongis.
The weak-ſtalked, oppoſite-leaved, long-ſpiked Lantana.

The root is brachiated; the ſtem is angular, weak, and has a pith in it; it riſes to three or four feet high: the leaves are two inches long, and, in the broadeſt part, an inch broad, dentated about the edges, and much reſembling thoſe of ſage: the flowers are purple, and ſtand in ſpikes an inch long.

It is a native of America. Plumier calls it, Camara arboreſcens ſalviæ folio.

The other ſpecies are, 1. The prickly, oppoſite-leaved Camara, called ſcarlet Myrobatindum. 2. The larger-leaved Camara. 3. The more hoary Camara. Authors have added another under the name of the round-leaved Myrobatindum, but it is only a variety of the firſt.

GMELINA.

THE calyx is obſcurely divided into four ſegments at the edge: the corolla is campanulated, and divided alſo into four ſegments: the antheræ are bipartite.

It is a native of Ruſſia; the characters ſufficiently diſtinguiſh it.

LOESELIA.

THE calyx is divided into four parts: the corolla has but one lip, and that is divided into five ſegments; againſt this ſtand the ſtamina, which are bent: the fruit is a capſule, containing three cells, and in each ſeveral ſeeds.

It is an American, deſcribed by Houſton under the name of Royenia. The characters ſufficiently diſtinguiſh it, without any farther deſcription.

SELAGO.

THE calyx is divided into four parts; the tube of the corolla is capillary: the limb is nearly equal; the ſeed is ſingle. The characters ſufficiently diſtinguiſh it.

PETRÆA.

THE calyx is very large, patent, coloured, and divided into five ſegments: the corolla is alſo patent, and is of a rotated form.

Petræa foliis rugoſis ovatis.
The oval, rugoſe-leaved Petræa.

The root is brachiated; the ſhrub riſes to ten feet high: the leaves are three inches long, an inch and a half broad, even at the edges, and very rough to the touch: the flowers ſtand in long, ſlender ſpikes; they are ſmall, and of a pale yellowiſh hue.

It is a native of America.

The other ſpecies are, 1. The ſmaller-leaved Petræa. 2. The larger-flowered Petræa.

CELSIA.

THE calyx is divided into five ſegments; the corolla is rotated; the ſtamina are bearded; and the capſule contains two cells. The characters ſufficiently diſtinguiſh it.

CAPRARIA.

THE calyx is divided into five ſegments; the corolla is campanulated, ventricoſe, and divided into five ſegments: the capſule is formed of two valves; it contains only one cell, and in it a great number of ſeeds.

This genus comprehends the Samoloides of Boerhaave, and the Ageratum of Tournefort.

Capraria foliis ſubovatis ſerratis.
The oval and ſerrated-leaved Capraria.

The root is yellow, ſhort, and fibrated; the radical leaves are numerous, of an oblong, oval figure, ſmall, and ſerrated about the edges: the ſtalks are ſlender, and hang from out the cracks of the rocks: the flowers are moderately large, of a beautiful purple, and very ſweet-ſcented.

It is a native of Italy. C. Bauhine colls it, Ageratum ſerratum Alpinum.

The other ſpecies are, 1. The rapunculus-leaved Capraria. 2. The narrow-leaved, hairy Capraria. 3. The taller Capraria.

DIGITALIS.

THE calyx is divided into five parts; the corolla is of a campanulated form, ventricoſe, and divided into three ſegments: the capſule is of an oval figure.

Digitalis foliis calycinis lanceolatis, corollis acutis.
The Digitalis, with the calycine leaves lanceolate, and with acute corollæ.

Yellow Foxglove.

The root is oblong, thick, and fibrated; the ſtalk is robuſt, thick, and four feet high: the leaves are ſix inches long, and near three broad, crenated, of a dark green above, and hairy below: the flowers are ſmall, and of a greeniſh-yellow; they ſtand in long ſeries on the tops of the ſtalks.

It is a native of Italy. C. Bauhine calls it, Digitalis lutea vel pallida parvo flore.

The other ſpecies are, 1. The common, purple Digitalis. 2. The ſmaller, purple Digitalis. 3. The oriental Digitalis, called Seſamum. 4. The trifid-leaved, white Digitalis. 5. The little Digitalis, called Gratiola. 6. The flax-leaved Digitalis. 7. The great-flowered, yellow Digitalis. 8. The narrow-leaved, little-flowered Digitalis. 9. The narrow-leaved, yellow Digitalis. 10. The broad-leaved, browniſh-

flowered

flowered Digitalis. 11. The narrow-leaved, ferrugineous-flowered Digitalis. 12. The narrow-leaved, purple Digitalis. 13. The very narrow-leaved, blackish-flowered Digitalis.

BIGNONIA.

THE calyx is of a cyathiform figure, and is divided into five segments: the mouth of the corolla is campanulated, and divided into five segments: the fruit is a pod, containing two cells: the seeds are membranaceous.

This genus comprehends the Bignonia of Tournefort, and the Pseudo-gelseminum of Rivinus.

Bignonia foliis pinnatis, foliolis incisis, geniculis radicatis.
The pinnated-leaved Bignonia, rooting at the joints.

The scarlet, Trumpet-flower.

The root is brachiated; the stem is slender, tortuous, ramose, and twelve feet, or more, in length; it needs support, and infixes it's roots from every joint, where it touches any thing: the leaves are pinnated, and seven inches long; the pinnæ three quarters of an inch long, half an inch broad, and serrated: the flowers stand four or five together, and are very large, and of a beautiful scarlet.

It is a native of America. Cornutus calls it, Gelseminum Indicum; others, Bignonia fraxini folio.

The other species are, 1. The yellow-flowered, ash-leaved Bignonia. 2. The short-podded Bignonia. 3. The very long-podded, yellow Bignonia. 4. The broad-podded Bignonia. 5. The violet-flowered, bifoliate Bignonia. 6. The box-leaved Bignonia. 7. The undulated-leaved Bignonia. 8. The cordated-leaved Bignonia. 9. The long, single-leaved Bignonia. 10. The five-leaved, red-flowered Bignonia.

CITHARESEYLON.

THE calyx is campanulated, and divided into five segments: the corolla is infundibuliform and rotated: the segments are hairy above, and equal.

These characters sufficiently distinguish it, without a farther description.

MARTYNIA.

THE calyx is divided into five segments: the corolla is campanulated, gibbous at the base, and contains a honey-juice there; the stamina are bent among one another, and there is a rudiment of a fifth between the upper ones.

Martynia foliis ovato-lanceolatis.
The ovato-lanceolate-leaved Martynia.

The root is tuberous and jointed: the stalk is round, thick, and spotted: the leaves are four inches long, and three broad, at the base: the flowers are an inch long, and near as much in breadth; they are of a beautiful blue.

It is a native of America; we have it in our stoves.

The other species are, 1. The larger-leaved, purple Martynia. 2. The white Martynia, with a long tube. 3. The divided-leaved Martynia.

SCROPHULARIA.

THE calyx is divided into five parts: the corolla is of a globose figure; it's upper lip is bent downwards.

Scrophularia

Scrophularia foliis cordatis, pedunculis ſolitariis multifloris.
The cordated-leaved Scrophularia, with ſingle, many-flowered peduncles.

Yellow Figwort.

The root is tuberous and white: the ſtalk is ſquare; the leaves ſtand two at a joint, and are broadeſt near the baſe, and terminate in a point; from the ala of each riſes a peduncle which ſupports ſeveral flowers; theſe are ſmall and yellow.

It is a native of Italy, but is not common. C. Bauhine calls it, Scrophularia flore luteo.

The other ſpecies are, 1. The common, knobby-rooted Scrophularia. 2. The great, hairy Scrophularia. 3. The water Scrophularia. 4. The nettle-leaved Scrophularia. 5. The baum-leaved Scrophularia. 6. The betony-leaved Scrophularia. 7. The ſhrubby, teucrium-leaved Scrophularia. 8. The ſmooth, elder-leaved Scrophularia. 9. The yellow Scrophularia, with thick, roundiſh leaves. 10. The fern-leaved Scrophularia. 11. The ſhining, rock Scrophularia. 12. The five-leaved Scrophularia. 13. The ſhrubby, vervain-leaved Scrophularia.

BESLERIA.

THE calyx is divided into five ſegments: the fruit is a berry of a globoſe form, containing ſeveral ſeeds.

It is an American, deſcribed by Plumier, 5. Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

CORNUTIA.

THE calyx has five indentings at the edge: the ſtamina are longer than the corolla: the fruit is a berry, containing only a ſingle ſeed.

This is an American alſo, deſcribed by Plumier, 17. It's characters ſufficiently diſtinguiſh it.

BROWALLIA.

THE calyx has five indentings at the extremity: the corolla is patent, and is divided into five equal ſegments at the edge: the umbilicus is cloſed by the two large antheræ. Of this genus there is but one known ſpecies.

BROWALLIA.

The root is fibrated; the plant grows to a foot and a half high: the leaves are placed alternately; they are oval, rough, and ſtand on pedicles: the flowers ſtand ſingly on peduncles, ariſing from the alæ of the leaves: they are blue, and the upper ſegment has a ſpot of yellow.

It is a native of South America.

ERINUS.

THE calyx is compoſed of five leaves: the limb of the corolla is divided into five equal, emarginated ſegments.

It is an American. The characters ſufficiently diſtinguiſh it.

BUCHNERA.

THE calyx has five obſcure indentings at it's edge; the corolla has five equal and obverſely cordated ſegments at it's edge. Theſe characters ſufficiently diſtinguiſh it.

LIMOSELLA.

THE calyx is divided into five ſegments at the edge: the corolla is alſo divided into five equal ſegments: the capſule is formed of two valves; it contains a ſingle cell, and in it ſeveral ſeeds.

This genus comprehends the Plantaginella of Dillenius. There is but one known ſpecies of it.

LIMOSELLA.

The root is ſmall, oblong, and fibrated: the leaves are numerous; they are placed on long pedicles, and are oblong and pointed. In the midſt of theſe riſes a ſingle ſtalk, very ſlender, and about an inch high, on which ſtands one ſmall, white flower.

It is common with us in muddy places. C. Bauhine calls it, Plantaginella paluſtris.

Claſs the Fourteenth. Order the Second.

Diviſion the Third.

Didynamia Angioſpermia, with double ſtigmata.

OBOLARIA.

THERE is no calyx: the corolla is campanulated, and divided into four ſegments at the edge; the fruit is a capſule, formed of two valves, and containing ſeveral ſeeds. The characters diſtinguiſh it ſufficiently.

OROBANCHE.

THE calyx is divided into four parts; the corolla is ringent: the capſule is formed of two valves; it contains a ſingle cell, and in it ſeveral minute ſeeds.

Orobanche caule ſimplici, corollis majoribus.
The large-flowered, ſimple-ſtalked Orobanche. **Broom-rape.**

The root is fibrous; the plant grows to a foot and a half high: the ſtalk is ſimple, very thick, of a brown colour, and ornamented with a few membranes inſtead of leaves; it is bulbous at the baſe, and at the top forms a ſpike of flowers; theſe are of a yellowiſh-brown, wide and gaping. The whole plant is of the ſame general, tawny, or yellowiſh-brown colour, and it has no leaves.

It is common in our broom-fields, and ſometimes in places where there is none of that ſhrub, J. Bauhine calls it, Orobanche flore majore.

The other ſpecies are, 1. The great, ſtinking Orobanche, with ſmaller flowers. 2. The purple-flowered, leſſer Orobanche. 3. The ſmall-flowered Orobanche. 4. The blue-flowered Orobanche. 5. The ſmall-flowered, ramoſe Orobanche. 6. The duſky-branched, American Orobanche.

LIPPIA.

THE calyx is roundiſh, and has four indentings at the edge; it is erect, compreſſed, and membranaceous: the capſule is covered: it is formed of two valves; it contains only one cell, and in it two ſeeds.

It is an American, deſcribed by Houſton. Theſe characters ſufficiently diſtinguiſh it.

MIMULUS.

THE calyx is of a priſmatic figure, and has four indentings at it's edge: the corolla is ringent, and it's upper lip is folded back at the ſides: the capſule contains two cells, and each ſeveral ſeeds. There is but one known ſpecies of this genus.

MIMULUS.

MIMULUS.

The root is creeping; the plant riſes to two feet high; the ſtalk is robuſt, ſmooth, and ſquare: the leaves ſtand two at a joint; they have no pedicles, but embrace the ſtalk at their baſe; they are oblong and narrow: the flowers are large, and of a beautiful blue; they ſtand on pedicles ariſing from the alæ of the leaves.

It is a native of Virginia. Ray calls it, Digitalis perfoliata glabra flore violaceo minore; Moriſon, Digitalis Lyſimachiæ facie.

BONTIA.

THE calyx is divided into five ſegments: the lips of the corolla are bent back; the fruit is a drupe of an oval figure, containing only a ſingle ſeed.

It is an American, deſcribed by Plumier, 23. It's characters ſufficiently diſtinguiſh it.

SESAMUM.

THE calyx is divided into five ſegments: the corolla is of a campanulated form, and divided alſo into five ſegments, the loweſt of which is the largeſt: the ſtigmata are of a lanceolated figure, and the capſule contains four cells. Of this there is but one known ſpecies.

SESAMUM. **The Oily Grain Plant.**

The root is oblong and fibrated: the ſtalk is ſingle, robuſt, firm, a foot and a half high, and fleſhy: the leaves ſtand on long pedicles; they are oblong, narrow, and ſerrated: the flowers are very large, of a beautiful blue on the outſide, and white within; they reſemble thoſe of the foxglove in ſhape, and they ſtand on pedicles ariſing from the alæ of the leaves.

It is a native of the Eaſt. It's ſeeds, and an oil extracted from them, were once kept in our ſhops; now both are unknown there.

DODARTIA.

THE calyx has five indentings at it's edge; the lower lip of the corolla is twice as long as the other: the capſule is of a globoſe figure, and contains two cells.

It is an oriental, of which there is only one known ſpecies. The characters ſufficiently diſtinguiſh it.

RUELLIA.

THE calyx is divided into five parts; the corolla is of a ſomewhat campanulated figure: the capſule burſts open, when ripe, by means of certain elaſtic denticles.

It is an American. There are two ſpecies; one a native of Virginia and Carolina, the other of Barbadoes. The former has a great many flowers on one common peduncle, the other only three.

BARLERIA.

THE calyx is divided into five parts; two of the ſtamina are vaſtly ſmaller than the others: the capſule is formed of two valves; it is of a quadrangular figure, and contains only one cell: it is elaſtic without the ungues, or denticles of the Ruellia.

It is an American, deſcribed by Plumier 3. 31. The characters ſufficiently diſtinguiſh it.

OVIEDA.

THE calyx is divided into five ſegments: the tube of the corolla is cylindric, and extreamly long: the fruit is a globoſe berry, containing two ſeeds.

It is an American, deſcribed by Plumier under the name of Valdia. The characters ſufficiently diſtinguiſh it.

COLUMNEA.

COLUMNÉA.

THE calyx is divided into five ſegments: the upper lip of the corolla is arched and undivided: the fruit is a globoſe berry, containing two cells, and in each ſeveral ſeeds.

It is an American, deſcribed by Plumier, 39. The characters ſufficiently diſtinguiſh it.

CLERODENDRUM.

THE calyx is of a campanulated form, and divided into five ſegments; the tube of the corolla is filiform: the limb is divided into five equal ſegments: the ſtamina are extreamly long; they ſtand wide apart between the ſegments of the corolla: the fruit is a berry. Of this there is but one known ſpecies.

CLERODENDRUM.

The root is yellow and fibrated: the ſhrub riſes to three feet high; the ſtem is brittle, and appears ſquare: the leaves are four inches long, and three broad: the flowers ſtand on long pedicles at the tops of the branches; they are large and white.

It is a native of Malabar, and is deſcribed in the Hort. Mal. under the name of Perager.

VOLKAMERIA.

THE calyx is divided into five ſegments: the tube of the corolla is capillary, and it's limb is divided alſo into five equal ſegments: the ſtamina are long and ſeparate; the fruit is a dry capſule, containing two ſeeds.

It is an American. The characters ſufficiently diſtinguiſh it.

VITEX.

THE calyx is terminated by five indentings: the corolla is divided into ſix ſegments at the extremity; the fruit is a berry, containing four ſeeds.

Vitex foliis anguſtioribus. **The Chaſte Tree.**
The narrower-leaved Vitex.

The root is brachiated; the ſhrub riſes to four or ſix feet high; the bark is greyiſh; the leaves ſtand on long pedicles, and are divided deeply into five ſegments, ſo as to appear digitated: the flowers are ſmall and reddiſh; they ſtand in ſpikes.

It is a native of France. C. Bauhine calls it, Vitex foliis anguſtioribus cannabis more diſpoſitis.

The other ſpecies are, 1. The narrow-leaved Vitex, with ſmall, blue flowers. 2. The broad-leaved, ſerrated Vitex. 3. The dwarf, very narrow-leaved Vitex.

ACANTHUS.

THE calyx is compoſed of three pairs of leaves: the corolla has but one lip, which is bent downward, and divided into four ſegments: the capſule contains two cells.

Acanthus foliis ſinuatis inermibus. **Common Bear's-breech.**
The Acanthus, with ſinuated leaves, without prickles.

The root is oblong, thick, and fibrated; the plant riſes to three feet high; the ſtalk is round, green, and thick: the leaves are ten inches long, and four or five wide, of a beautiful green, and deeply ſinuated at the edges: the flowers are large and white, and ſtand in a ſpike at the top of the ſtalk.

It

It is a native of Italy. C. Bauhine calls it, Acanthus ſativus, ſive Mollis Virgilii.

The other ſpecies are, 1. The prickly Acanthus. 2. The Acanthus, with few, and thoſe ſhort, ſpines.

Claſs the Fourteenth. Order the Second.

Diviſion the Fourth.

Didynamia Angioſpermia, with corollæ compoſed of numerous petals.

MELIANTHUS.

THE calyx is compoſed of five leaves, the lower one of which is gibbous: the corolla is compoſed of four petals, and has a nectarium between the two loweſt: the fruit is a capſule containing four cells.

Melianthus foliis pinnatis, foliolis ſerratis.
The pinnated-leaved Melianthus, with ſerrated pinnulæ.

The root is oblong, woody, ſlender, and fibrated: the plant grows to ſix inches high: the leaves ſtand on long pedicles; they are compoſed of ſeveral pairs of pinnæ, which are ſhort, broad, ſerrated, and obtuſely pointed: the flowers ſtand in ſpikes, of a browniſh colour, and three quarters of an inch long, and have a quantity of a ſweet honey-juice at their baſe.

It is a native of Virginia. Tournefort calls it, Melianthus Americanus minor.

The other ſpecies are, 1. The great, African, ſpiked Melianthus. 2. The procumbent, pimpernel-leaved, African Melianthus.

Claſs the Fifteenth.

TETRADYNAMIA.

Plants which have in every flower four efficacious ſtamina.

THIS claſs comprehends the Herbæ flore cruciformi of Tournefort, and the Herbæ tetrapetalæ ſiliquoſæ et ſiliculoſæ of Ray.

The claſſical character ſhall be delivered here at large, as in the former claſs, and the diſtinctive characters only mentioned under the ſeveral genera, as in that claſs: the common characters of them all may, therefore, be referred to in this place.

The calyx is an oblong perianthium, compoſed of four leaves; theſe are of an oblong, oval figure, hollow, obtuſe, and connivent; they are deciduous; the oppoſite ones are equal, and the baſe is gibbous downwards: the calyx is, in this claſs, the nectarium, and it is, therefore, that it is made gibbous in this part. The corolla conſiſts of four petals, equal in ſize, and arranged in form of a croſs: their ungues are planoſubulate, erect, and ſomewhat longer than the calyx: the limb is plane; the bracteæ are broadeſt in the outer part, and are obtuſe, and ſcarce touch one another at the ſides: the inſertion of the petals is in the ſame circle with the ſtamina. The ſtamina are ſix erect, ſubulated filaments: two of theſe, placed oppoſite, are of the length of the cup; the other four are ſomething longer, and are, however, ſhorter than the corolla: the antheræ are oblong, and acuminated; they are thickeſt at the baſe, erect, and have their apices turned outwards. The gland of the nectarium is very variouſly formed, and ſituated, in the different genera; it is affixed often to the baſe of the ſtamina, particularly of the two ſhorter ones, and they are often bent ſo as not to preſs upon it; and, from that circumſtance alone, become ſhorter than the others. The germen is ſituated on the receptacle, and grows continually longer and longer: there is either no ſtyle, or one that is of the length of the longer ſtamina: the ſtigma is obtuſe. The fruit is a pod, compoſed of two valves, and often containing two cells; it ſplits, when ripe, from the apex to the baſe, and has often the diſſipimentum prominent at it's apex, beyond the valves: this has before performed the office of a ſtyle. The ſeeds are round and nutant; they are arranged alternately and longitudinally in the pods: the

receptacle is linear, and ſurrounds the diſſipimentum, and is immerſed in the ſutures of the pod.

Such are the claſſical characters of the Tetradynamia, common to all the genera, and, therefore, not neceſſary to be repeated under every generical name.

The Tetradynamia have ſome of them roundiſh pods, with the ſtyle adhering to them, often equal to the pod itſelf in length: others of them have very long pods, without this addition of a long ſtyle to them.

They are hence naturally arranged into two orders; the one containing thoſe with the round pods, under the title of Siliculoſæ; the other, thoſe with the long pods, under that of Siliquoſæ.

Claſs the Fifteenth. Order the Firſt.

TETRADYNAMIA SILICULOSA.

Plants which have four efficacious ſtamina and roundiſh, or ſhort, pods.

MYAGRUM.

THE pod is terminated by a conic ſtyle, and the cell contains uſually only one ſeed. This genus comprehends the Myagrum, and ſome of the Alyſſa, of Tournefort.

Myagrum ſiliculis obverſe cordatis ſubſeſſilibus, foliis amplexicaulibus.
The cordated, ſeſſile-podded Myagrum, with leaves embracing the ſtalks.

The root is oblong, thick, and fibrated: the ſtalks riſe to two feet high, or more; the leaves are large, broadeſt at the baſe, ſomewhat laciniated at the edges, and of a bluiſh-green colour: the flowers are ſmall and yellow.

It is common in corn-fields in moſt parts of Europe. C. Bauhine calls it, Myagrum monoſpermum latifolium.

The other ſpecies are, 1. The ſmaller Myagrum, with large flowers. 2. The narrower-leaved Myagrum. 3. The hairy, ſhort-leaved Alyſſum. 4. The longer-leaved, hairy Alyſſum. 5. The ſea Alyſſum.

ANASTATICA.

THE pod is blunt, and coronated with a margin: the ſtyle is intermediate, mucronated, and oblique: the cell contains but a ſingle ſeed.

Of this genus there is but one known ſpecies.

ANASTATICA. **Roſe of Jericho.**

The root is woody, oblong, and ſimple: the ſtalks are numerous, woody, and ſix or ſeven inches long, very ramoſe, and of a greyiſh colour: the leaves ſtand ſingly; they are an inch and a half long, half an inch broad, ſerrated at the edges, and of a greyiſh-green colour, and hairy: the flowers are ſmall and white; they ſtand in cluſters, at the divarications of the branches.

It grows wild about the ſhores of the Red Sea. When the ſeeds are ripe, the branches draw up and contract, ſo that the whole plant forms a kind of a ball, or globular body, which will expand on laying it a little while in warm water.

SUBULARIA.

THE pod is of an obverſely cordated figure, and entire: the valves are oval and hollow, and ſtand contrary to the diſſipimentum.

Subularia

Subularia erecta folio rigidissimo.
The erect, rigid-leaved Subularia.

The root is fibrous and white: the leaves are four inches long, rounded, as thick as a common rush, and terminate in a point at the extremities: the flowers are small and white; the seeds numerous and yellow.

It grows on the mud, in the bottoms of our mountainous lakes in Wales. Ray calls it, Subularia lacustris, seu Calamistrum herba aquatico-Alpina.

The other species are, 1. The creeping, softer-leaved Subularia. 2. The long-leaved, brittle Subularia. 3. The soft, and thicker-leaved Subularia. 4. The largest Subularia, with the leaves hollowed within.

LEPIDIUM.

THE pod is somewhat obversely cordated; it's valves are hollowed, and it contains several seeds.

This genus comprehends the Lepidium and the Nasturtium of authors.

Lepidium foliis integris ovato-lanceolatis.
The ovato-lanceolate, undivided-leaved Lepidium.

The root is fibrous: the plant rises to three feet high: the stalk is round, smooth, of a pale green colour, and firm: the leaves are four inches long, and two and a half broad, of a bright green colour, and even at the edges: the flowers stand in vast clusters, at the tops of the branches; they are small and white.

It is a native of England, but not very common. C. Bauhine calls it, Lepidium latifolium.

The other species are, 1. Of those called Lepidia by Tournefort, 1. The dwarf, hairy Lepidium, or large Draba. 2. The dwarf, less hairy, Syrian Lepidium, called lesser Draba, and broad-leaved Iberis by some. 3. The grassy-leaved Lepidium, called common Iberis. 4. The shrubby, capillaceous-leaved, Spanish Lepidium.

Of those called Nasturtium there are, 1. The common, garden Nasturtium, or garden Cress. 2. The narrower-leaved, garden Cress. 3. The broad-leaved, garden Nasturtium. 4. The umbellated, garden Nasturtium. 5. The fine divided-leaved Nasturtium. 6. The perfoliate and fine divided-leaved Nasturtium. 7. The rough-podded Nasturtium, or Coronopus Ruellii. 8. The little Nasturtium, with finely-divided leaves. 9. The dwarf, cardamine-leaved Nasturtium. 10. The shepherd's-purse-leaved, dwarf Nasturtium. 11. The dwarf, vernal Nasturtium, with no leaves on the stalk.

COCHLEARIA.

THE pod is of a somewhat heart-like figure, turgid and scabrous: the valves are gibbous.

Cochlearia foliis ovato-lanceolatis sinuatis. **Sea Scurvy-grass.**
The Cochlearia, with ovato-lanceolate, sinuated leaves.

The root is fibrous: the stalks are striated, oblique, and eight or ten inches high: the leaves are an inch long, half an inch broad, sinuated at the edges, and pointed at the ends: the flowers are small and white, and stand in considerable number toward the tops of the stalks.

It is common on our sea-coasts. C. Bauhine calls it, Cochlearia folio sinuato.

The other species are, 1. The round-leaved Cochlearia. 2. The great, erect, long-leaved Cochlearia. 3. The ivy-leaved Cochlearia. 4. The pale red-flowered Cochlearia. 5. The procumbent, Danish Cochlearia. 6. The little, erect, Danish Cochlearia. 7. The woad-leaved Cochlearia; and, 6. The Cochlearia commonly called Horseradish.

THLASPI.

THLASPI.

THE pod is narrowest at the base, and emarginated; the valves are navicular; the seeds numerous.

This genus comprehends the Thlaspi and the Bursa pastoris of authors.

Thlaspi siliculis orbiculatis, foliis oblongis dentatis glabris.
The orbiculated-podded Thlaspi, with oblong, smooth, dentated leaves. **Treacle Mustard.**

The root is oblong, slender, white, and fibrated: the stalk is round, erect, branched, and is ten inches high: the leaves stand singly on it, without pedicles; they are an inch long, half an inch broad, of a pale green colour, and notched at the edges: the flowers are tolerably large and white; the pods very large and broad.

It is a native of our corn-fields. C. Bauhine calls it, Thlaspi arvense siliquis latis.

It's seeds should be used in some of the compositions of the shops, but those of the common garden Cress are usually sold in their stead.

The other species are, 1. The sagittated and dentated-leaved Thlaspi, called common Thlaspi. 2. The umbellated Thlaspi. 3. The great and little perfoliate, field Thlaspi, for they are only varieties of the same species. 4. The hoary, smaller-leaved Thlaspi. 5. The shorter-leaved Thlaspi. 6. The narrow and thick-leaved Thlaspi. 7. The very narrow-leaved, clustered Thlaspi. 8. The daisy-leaved Thlaspi. 9. The common shepherd's-purse; from the varieties of which have been made, by authors, many species.

IBERIS.

THE corolla is irregular; the two exterior petals are the larger.

Iberis foliis lanceolatis acuminatis inferioribus serratis.
The Iberis, with lanceolated and acuminated leaves, the lower ones serrated. **Candy Tuft.**

The root is oblong, thick, and white: the plant grows to a foot high: the stalks are round and ramose, large, and of a pale green colour; the leaves are oblong, pointed, and of a dusky green: the flowers are large, and of a beautiful red, sometimes white; they stand in umbels, on the tops of the stalks.

It is a native of Crete; it is very common in our gardens. C. Bauhine calls it, Thlaspi umbellatum Creticum Iberidis folio.

The other species are, 1. The shrubby, leucoium-leaved Iberis. 2. The field Iberis, with umbellated flowers. 3. The narrow-leaved, purple, umbellated Iberis. 4. The acute-leaved Iberis.

BISCUTELLA.

THE pod is bilobous, rounded, and compresso-plane: the leaves of the calyx are gibbous at the base.

This genus comprehends the Thlaspidium of Tournefort and Rivinus.

Biscutella siliquis orbiculato-didymis a stylo dehiscentibus.
The Biscutella, with orbiculated, didymous pods, splitting from the style. **Buckler Mustard.**

The root is oblong, white, and fibrated: the stalks are numerous, slender, and eight or ten inches high: the radical leaves are numerous, three inches long, and about half an inch broad, serrated at the edges, and a little hairy: the stalks have three or four leaves on them; they are oblong, narrow, and hairy: the flowers are small and yellowish; they stand in clusters, at the tops of the stalks; the pods are beautiful, broad, peltated, and foliaceous.

It is a native of France and Italy. Clusius calls it, Thlaspi clypeatum.

The

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15

Cymbaria

Thlaspi

Lepidium

Sinapistrum

Teucrium

Phelypæa

Iberis

Cheiranthus

Cardamine

Lamium

Phlomis

Clypeola

Melissa

Stachys

Anblatum

Cochlearia

Hesperis

Brassica

Antirrhinum

Dodartia

Betonica

Lunaria

Moluccella

Rhinanthus

Raphanus

Bunias

Crambe

Digitalis

Leonurus

Orobanche

Lathræa

Alyssum

Dentaria

B. Cole Sculp

The other ſpecies are, 1. The hairy Biſcutella, with a ſpur to the flower. 2. The rough, pale yellow-flowered Thlaſpidium. 3. The radiſh-leaved Thlaſpidium. 4. The leucoium-leaved, ever-flowering Thlaſpidium. 5. The ſhrubby, narrow-leaved Thlaſpidium. 6. The alkanet-leaved Thlaſpidium. 7. The ſpiked Thlaſpidium. 8. The narrow-leaved, ſmooth Thlaſpidium. 9. The little, rough Thlaſpidium, or Biſcutella.

CLYPEOLA.

THE pod is of an orbiculated figure, undivided, and compreſſo-plane.
This genus contains the Ionthlaſpi of Tournefort and others.

Clypeola ſiliculis unilocularibus monoſpermis. **Clypeated Muſtard.**
The Clypeola, with pods with ſingle ſeeds in them.

The root is oblong, white, and fibrated: the ſtalks are numerous, rough, procumbent, and five or ſix inches long: the leaves are numerous, very ſmall, hoary, and white: the flowers are very ſmall and yellow: the pods form a kind of ſpike half-way down the plant.

It is a native of France and Italy. C. Bauhine calls it, Thlaſpi Clypeatum ſerpylli folio; Columna, Ionthlaſpi.

The other ſpecies are, 1. The ſhorter-leaved, yellow Clypeola. 2. The oblong-leaved Clypeola.

ALYSSUM.

THE two ſhorter ſtamina in the flower have a denticulation on their inner ſide.
This genus comprehends the Alyſſon, Alyſſoides, and Veſicaria of Tournefort.

Alyſſum ramulis ſuffruticoſis diffuſis, foliis punctato-echinatis.
The diffuſe-ſtalked, ſhrubby Alyſſum, with punctato-echinated leaves.

The root is long, white, and woody: the ſtalks are numerous, ſeven or eight inches long, rough, and of a greyiſh-green colour: the leaves are oblong, narrow, punctated, and very rough to the touch: the flowers are moderately large and yellow.

It is a native of Italy. C. Bauhine calls it, Thlaſpi montanum luteum.

The other ſpecies of Alyſſum are, 1. The great, ſhort-leaved Alyſſum. 2. The little, hoary, ſerpyllum-leaved Alyſſum. 3. The maritime Alyſſum. 4. The halimus-leaved Alyſſum. 5. The narrow, ſilvery-leaved Alyſſum. 6. The prickly, ſhrubby Alyſſum. 7. The ſhrubby, hoary Alyſſum. 8. The large, yellow-flowered Alyſſum. 9. The polygonum-leaved, hoary Alyſſum. 10. The veronica-leaved Alyſſum. 11. The acute, auriculated-leaved Alyſſum. 12. The great-fruited, auriculated-leaved Alyſſum. 13. The trifid-leaved, mountain Alyſſum. 14. The green, leucoium-leaved Alyſſum. 15. The hoary, ſinuated-leaved Alyſſum. 16. The dentated-leaved, oriental Alyſſum, or Veſicaria.

LUNARIA.

THE pod is of an elliptic ſhape, and compreſſo-plane: the valves are equal to the diſſipiment, and parallel.

Lunaria foliis ovato-lanceolatis ſerratis. **Honeſty.**
The ovato-lanceolated, ſerrated-leaved Lunaria.

The root is compoſed of a number of tuberoſities: the ſtalk riſes to two feet high: the leaves are ſomewhat like thoſe of the common nettle, broad, ſerrated, and hairy: the flowers ſtand in conſiderable numbers, on the upper part of the ſtalks; they are ſmall, and of a purpliſh colour: the pods are very broad, and of a ſilvery-white.

It is a native of Italy and Germany. C. Bauhine calls it, Viola Lunaria major ſiliqua rotunda.

The other ſpecies are, 1. The broader-leaved, white-flowered Lunaria. 2. The narrower-leaved, long-podded Lunaria. 3. The leucoium-leaved, long-podded Lunaria. 4. The ſmall-podded, leucoium-leaved Lunaria; and, 5. The Lunaria, with the wreathen pod.

DRABA.

THE pod is of an oval, oblong figure; the valves are equal to the diſſipimentum: there is no ſtyle.

Draba caulibus nudis, foliis inciſis.
The naked-ſtalked, cut-leaved Draba.

The root is oblong, ſlender, fibrated, and white: the leaves are ſmall, of an oblong figure, jagged at the edges, and of a duſky green colour: the ſtalks are round, naked, and four inches high: the flowers ſtand in a kind of ſhort ſpikes, at the tops, and are ſmall and white.

It is a native of France. C. Bauhine calls it, Burſa paſtoris minor loculo oblongo, foliis laciniatis.

The other ſpecies are, 1. The long-leaved, hairy Draba. 2. The ſmooth, ſhorter-leaved Draba.

VELLA.

THE pod has a diſſipimentum of twice the bigneſs of the valves, and of an oval figure. This character alone ſufficiently diſtinguiſhes it, without a farther deſcription.

There is but one ſpecies of this genus. C. Bauhine calls it, Naſturtium ſylveſtre erucæ affine.

Claſs the Fifteenth.

Diviſion the Second.

TETRADYNAMIA SILIQUOSA.

Plants which have four efficacious ſtamina in the flower, and long pods.

BUNIAS.

THE pod is of a ſquare figure, and the angles are unequal and acuminated. This genus comprehends the Erinago of Tournefort and others.

Bunias foliis antrorſum ſinuatis.
The Bunias, with leaves ſinuated forwards.

The root is oblong, white, and fibrated; the ſtalks are round, ſmooth, often reddiſh, and two feet high: the leaves are narrow, ſinuated, and hairy; there are very few of them on the ſtalks: the flowers are moderately large and yellow: the pods are ſhort, and terminate in a ſharp point.

It is a native of France. Tournefort calls it, Erucago ſegetum; C. Bauhine, Eruca ſiliqua quadrangula echinata.

The other ſpecies are, 1. The tall, oriental, dandelion-leaved Bunias. 2. The ſmall-leaved Bunias.

CHEIRANTHUS.

THE germen in the flower has, on each ſide, a little denticular protuberance: the leaves of the calyx are two, and are gibbous at the baſe: the ſeeds are plane. This genus comprehends the Leucoium of Tournefort and others.

Cheiranthus foliis lanceolatis obtusis incanis, siliquis truncatis. Stock Gilly-flower.
The obtuse, lanceolated-leaved Cheiranthus, with truncated pods.

The root is oblong, white, tortuous, and fibrated: the plant rises to two or three feet high: the stalk is round, thick, hoary, and ramose: the leaves are three inches long, an inch and a half broad, obtusely pointed, and white: the flowers stand in spikes, at the tops of the stalk, and are also white: the pods are long.

It is a native of the sea-coasts of Arabia, but is introduced into our gardens almost every-where, and has suffered strange variations by culture. C. Bauhine calls it, Leucoium incanum majus. The varieties of our purple and white double and single Stock-gilly-flowers are all from this single species; tho' authors have described them as distinct ones.

The other species really distinct are, 1. The narrower green-leaved, white-flowered Cheiranthus. 2. The small-flowered, white, perennial Cheiranthus. 3. The hesperis-leaved Cheiranthus. 4. The eruca-leaved Cheiranthus. 5. The sinuated-leaved, sea Cheiranthus. 6. The white, long-leaved, sea Cheiranthus. 7. The common, yellow Cheiranthus, or Wall-flower. 8. The larger-flowered, tuberculous, yellow Cheiranthus. 9. The large-flowered, serrated-leaved Cheiranthus. 10. The narrow-leaved, pale yellow-flowered, Alpine Cheiranthus.

HESPERIS.

THE petals of the corolla are bent obliquely: the pod is slender; the base of the stigma is bifurcated, and it's apex connivent.

Hesperis caule simplici, foliis ovato-lanceolatis denticulatis. Dames Violet.
The simple-stalked Hesperis, with ovato-lanceolate, denticulated leaves.

The root is oblong, white, woody, and fibrated: the stalks are hairy, robust, and three feet high: the leaves are of a dusky green colour, hairy, serrated, and pointed at the ends, two inches long, and three quarters of an inch broad: the flowers stand at the tops of the branches; they are moderately large, and of a beautiful purple colour, sometimes very pale, sometimes quite white.

It is a native of Italy. Dodonæus calls it, Viola matronalis; C. Bauhine, Hesperis hortensis.

The other species are, 1. The pale, scented, narrower-leaved Hesperis. 2. The common, scentless, field Hesperis. 3. The Hesperis, with articulated pods. 4. The common, roundish-leaved Hesperis, or Alliaria. 5. The very narrow, podded Hesperis. 6. The square, podded, leucoium-leaved Hesperis. 7. The corniculate Hesperis, with a dusky flower. 8. The thick-leaved, procumbent, sea Hesperis. 9. The hairy, blue Hesperis. 10. The dentated-leaved, large-flowered Hesperis. 11. The laciniated-leaved Hesperis, with lunated pods. 12. The shrubby Hesperis. 13. The coronopus-leaved Hesperis. 14. The great, blue, African, coronopus-leaved Hesperis.

RAPHANUS.

THE pod is rounded, torose, and, as it were, articulated: there are four melliferous glands in the corolla; two of them between the shorter stamina and the pistil, and two between the longer stamina and the calyx.

This genus comprehends the Raphanus, Raphanistrum, and Cakile of authors.

Raphanus

Raphanus siliquis torosis angustioribus glabris.
The Raphanus, with knotty, smooth, slender pods.
Jointed-podded Charlock.

The root is oblong and white: the plant rises to two feet high: the stalk is round, robust, and ramose: the leaves are three inches long, and two broad, of a figure approaching to oval, dentated at the edges, and of a deep green colour: the flowers are large and yellow; the pods two inches long, slender, and jointed, as it were.

It is frequent in our corn-fields. C. Bauhine calls it, Rapistrum luteum siliqua articulata.

The other species are, 1. The white-flowered, field Raphanus. 2. The striated-podded, field Raphanus. 3. The rocket-leaved, white-flowered, field Raphanus. 4. The great-podded, white-flowered Raphanus. 5. The common, garden Radish. 6. The black-rooted Radish.

DENTARIA.

THE pod bursts open with elasticity and violence, and the valves turn back: the stigma is emarginated.

Dentaria foliis septenis angustioribus.
The seven-leaved Dentaria.
Toothwort.

The root is oblique, ramose, and composed of a kind of squammose tuberosities: the leaves are placed on long pedicles, and each is composed of seven oblong, narrow, dentated pinnæ, three in pairs, and an odd one at the end: the stalk is tender, and ten inches high: the flowers are large, and of a beautiful pale red, or white, colour; they stand on the tops of the stalks, in a kind of spikes.

It is found in some of our woods. C. Bauhine calls it, Dentaria heptaphyllos.

The other species are, 1. The nine-leaved Dentaria. 2. The five-leaved Dentaria. 3. The narrower-leaved Dentaria. 4. The rough-leaved Dentaria. The number of leaves on a pedicle is not absolutely determinate in any of the same species, the same plant shewing variations in this respect; but the general number may always be seen. These plants frequently produce a kind of bulbs in the alæ of their leaves, as some of the lilies, the bistort, &c. do, which will produce new plants.

CARDAMINE.

THE pod bursts open with violence and elasticity, and the valves turn backward: the stigma is entire, not emarginated.

Cardamine foliis pinnatis, foliolis subrotundis integris.
The pinnated-leaved Cardamine, with the pinnules roundish and entire.
Ladies Smock.

The root is composed of a cluster of white fibres: the plant rises to a foot high: the stalk is round, green, and robust; the leaves are long, and composed of several pairs of pinnæ; the radical ones have the pinnæ round; those on the stalk longer and narrower: the flowers are large, beautiful, and white; they stand in clusters, on the tops of the stalks.

It is common in our meadows. C. Bauhine calls it, Cardamine vulgaris.

The other species are, 1. The smaller-flowered Cardamine. 2. The very small-flowered Cardamine. 3. The fumitory-leaved Cardamine. 4. The little, hairy, small-flowered Cardamine. 5. The tall and somewhat larger-flowered Cardamine. 6. The little, rocket-leaved Cardamine. 7. The mountain, asarum-leaved Cardamine. 8. The purple-flowered, hairy, celandine-leaved Cardamine. 9. The trifoliate, Alpine Cardamine. 10. The larger, African, trifoliate Cardamine. Most of these have been called by authors Nasturtia aquatica.

BRASSICA.

THE calyx is erect and connivent: the ſeeds are globoſe: there is a melliferous gland between the ſhorter ſtamina and the piſtil, and another between the longer ſtamina and the calyx.

This genus comprehends the Braſſica and Rapa of Tournefort, and the Erucæ of others.

Braſſica foliis lyratis, caule hirſuto, ſiliquis glabris. White Rocket.
The lyrate-leaved, hairy-ſtalked Braſſica, with ſmooth pods.

The root is oblong, white, and fibrated: the ſtalks are hairy, robuſt, and two feet high: the leaves are oblong and ſinuated, ſmooth, of a duſky green colour, and obtuſely pointed at the ends: the flowers ſtand in a kind of ſpikes, on the tops of the ſtalks; they are moderately large and white, with a tinge of bluiſh, or of yellowiſh, and have often ſtriæ of a deep bluiſh-black, in great numbers.

It is a native of Africa, but is common in our gardens. C. Bauhine calls it, Eruca hortenſis latifolia. It has always been diſtinguiſhed from the Braſſica, indeed, by authors, but not by nature.

The other ſpecies are, 1. The rough-podded Eruca, with yellow flowers. 2. The undivided-leaved Eruca. 3. The narrower-leaved Eruca. 4. The ſhorter-leaved Eruca.

Of thoſe called Braſſicæ by authors we have, 1. The common Cabbage, or Braſſica, whoſe root riſes into a kind of ſtalk in the upper part: there are ſeveral varieties of this, owing to culture, and other accidents, which have the honour to be raiſed to ſpecies by authors, as the common white Cabbage, the red Cabbage, the curled Cabbage, the fringed Cabbage, the laciniated, red Cabbage, the Cauleflower, the turnep Cabbage, the ſmallage-leaved Cabbage. 2. The wild Braſſica. 3. The tall, ramoſe, arboreſcent Braſſica. 4. The perfoliate Braſſica, with white flowers. 5. The Alpine, perennial Braſſica.

Of thoſe called Rapæ we have, 1. The common Rapa, or Turnep. 2. The long-rooted, narrow-leaved Rapa, or Napus ſativa.

SINAPIS.

THE calyx is patent: the ungues of the corolla are erect, and there is a gland, ſituate between the two ſhorter ſtamina and the piſtil, and another between the longer ſtamina and the calyx.

Sinapis ſiliquis hiſpidis, roſtro obliquo longiſſimo. White Muſtard.
The Sinapis, with rough pods, with a very long, oblique beak.

The root is oblong, white, and fibrated: the plant riſes to two feet high: the ſtalks are round, robuſt, and ramoſe: the leaves are large, oblong, of a duſky green colour, deeply ſinuated, and hairy, and very rough to the touch: the flowers are moderately large, and yellow; the ſeeds are whitiſh.

It is cultivated in gardens. C. Bauhine calls it, Sinapi apii folio; Dodonæus, Sinapi ſativum alterum.

The other ſpecies are, 1. The common Muſtard plant. 2. The early, black-ſeeded Sinapis. 3. The early Sinapis, with undivided leaves. 4. The eruca-leaved Sinapis. 5. The lobated-leaved Sinapis. 6. The naſturtium-leaved Sinapis. 7. The great, broad, lettuce-leaved Sinapis. 8. The narrower, lettuce-leaved Sinapis.

ARABIS.

THERE are four nectariferous glands, each of them affixed, in the manner of a reflex ſcale, to the inner part of the baſe of the calyx.

Arabis foliis amplexicaulibus, siliquis decurvis, planis, linearibus.
The Arabis, with leaves surrounding the stalk, and with plane, linear, crooked pods.

The root is white and oblong; the radical leaves are three inches long, half an inch broad, variously sinuated about the edges, and of a bluish-green: the stalk is round, slender, two feet high, and ramose; the leaves are oblong, and surround the stalks at their base: the flowers are numerous, and of a very pale yellow.

It is a native of Germany and Hungary. Tournefort calls it, Leucoium hesperidis folio.

The other species are, 1. The Russian, broad-leaved Arabis, with pendulous pods. 2. The narrow, rough-leaved Arabis.

ERYSIMUM.

THE pod is columnar, and exactly square. This genus comprehends several of the Turritis's and Hesperis's of authors.

Erysimum siliquis cauli appressis. Hedge
The Erysimum, with pods close to the stalk. Mustard.

The root is oblong, white, hard, and tortuous; the leaves are three inches long, an inch broad, deeply sinuated, and of a dusky greyish-green: the stalks are robust, rigid, round, and two feet high; the flowers are small and yellow; the pods stand halfway down the stalks, in form of a thin spike; they are short, and are applied close to the stalk.

It is common by way-sides. C. Bauhine calls it, Erysimum vulgare.

The other species are, 1. The smooth, broad-leaved Erysimum. 2. The short-podded, hoary-leaved Erysimum. 3. The Erysimum, called Alliaria. 4. The square-podded Hesperis of authors. 5. The smooth, rocket-leaved Erysimum. 6. The Erysimum, called Leucoium-leaved Turritis.

TURRITIS.

THE pod is extreamly long, and of an angular figure: the calyx and corolla are erect.

Turritis foliis omnibus dentatis hispidis, caulinis amplexicaulibus.
The Turritis, with all the leaves dentated and rough, those on the stalk surrounding it.

The root is white, oblong, and slender; the radical leaves are oblong, narrow, sinuated, and hairy: the stalk is slender, but robust, round, and a foot high: the leaves surround it at their bases; they are rough, oblong, narrow, and dentated: the flowers are small and white; the pods very long.

It is common in dry places. C. Bauhine calls it, Turritis minor.

The other species are, 1. The simple-stalked, lanceolated-leaved Turritis, or common Tower-mustard. 2. The succory-leaved and perfoliate Turritis. 3. The ramose Turritis. 4. The divided-leaved, larger-flowered Turritis.

SISYMBRIUM.

THE pod is incurvated; the calyx is patent; and the corolla is also patent.

Sisymbrium foliis pinnatis, foliolis subcordatis. **Water Cress.**
The pinnated-leaved Sisymbrium, with subcordated pinnules.

The root is fibrous; the stalk is slender and procumbent: the leaves are three inches long, composed of three or four pairs of short and broad pinnæ, with an odd one at the end: the flowers are small and white.

It is common about ditch-sides. C. Bauhine calls it, Nasturtium aquaticum vulgare.

The other species are, 1. The radish-leaved, short-podded Sisymbrium. 2. The Sisymbrium, with the lower leaves capillaceous, the rest pinnatifid. 3. The little-flowered Sisymbrium, with serrated pinnulæ. 4. The wormwood-leaved Sisymbrium. 5. The Sisymbrium, called by authors five-leaved, yellow Rocket. 6. The lesser-flowered Rocket of authors. 7. The great, yellow-flowered, rough-stalked Rocket of authors. 8. The rough-podded Sisymbrium. 9. The Sisymbrium, called cut-leaved, water Radish.

CRAMBE.

THE four long stamina are bifurcated at their tops: the antheræ are only on one of the points. This genus comprehends the Crambe and the Rapistrum of Tournefort.

Crambe foliis cauleque scabris. **Round-leaved Chariock.**
The Crambe, with the leaves and stalk both rough.

The root is oblong, thick, and white; the leaves are six inches long, rounded at the extremity, and sinuated about the edges: the stalk is round, robust, and firm; it rises to five feet high; the flowers are very numerous, large, and white: the pod contains but one seed.

It is a native of Spain. Morison calls it, Rapistrum maximum rotundifolium monospermon.

The other species are, 1. The auriculated, acute-leaved Crambe. 2. The longer-leaved Crambe. 3. The sea cabbage, or cabbage-leaved Crambe. 4. The rocket-leaved, cuspidated, podded Crambe. 5. The narrower-leaved, sea Crambe.

ISATIS.

THE pod is of a lanceolated figure, and contains only one cell, in which is a single seed: the valves forming the pod are two, and are navicular in shape.

Isatis foliis latioribus glaucis. **Woad.**
The broad, glaucous-leaved Isatis.

The root is oblong and very thick; the plant rises to three feet high: the stalk is round, rigid, thick, and branched: the leaves are broad, oblong, and very numerous; on the stalk the flowers are very numerous, small, and yellow.

It is cultivated in our fields for the use of dyers. C. Bauhine calls it, Isatis sativa sive latifolia.

The other species are, 1. The narrow-leaved, or wild Isatis. 2. The dwarf, Portugal, narrow-leaved Isatis.

CLEOME.

THERE are three nectariferous glands in the flower, one at every sinus of the cup, the lowest only excepted: all the petals are ascendent.

This genus comprehends the Sinapistrum of Tournefort and Rivinus.

Cleome pentaphyllea floribus gynandris. Cinquefoil, Baſtard Muſtard.
The five-leaved Cleome, with gynandrous flowers.

The root is oblong and white; the ſtalk is round, ſmooth, and two feet, or more, in height: the leaves ſtand on long pedicles, five on each; they are oblong, narrow, and pointed at the ends; thoſe toward the upper parts of the ſtalk are often only three on each pedicle: the flowers are moderately large and white; they ſtand in cluſters at the tops of the branches: the pods are an inch long.

It is a native of Africa, and the Eaſt and Weſt Indies. C. Bauhine calls it, Quinquefolium lupini folio.

The other ſpecies are, 1. The trifoliate Cleome, with crooked pods. 2. The narrower-leaved, reddiſh-flowered, cinquefoil Cleome. 3. The ſhrubby, trifoliate Cleome; and 4. The trifoliate, Portugal Cleome, with corniculated pods.

Claſs the Sixteenth.

MONADELPHIA.

Plants which have uniform ſtamina growing together at their baſe.

IN this, as in the two former claſſes, it will be moſt convenient to give the general claſſical character here, and to refer to it from every genus, only mentioning, as generical characters, the eſſential and diſtinctive ones.

Claſſical characters of the Monadelphia.

The calyx is a perianthium, it is never wanting; it is permanent, and in many genera double.

The corolla conſiſts of five petals, vertically cordated, and one of their ſides always embraces that of the next petal, the contrary way to the ſun's motion.

The ſtamina are filaments cohering at the baſe, and diſtinct at their tops: if numerous, the exterior ones are the ſhorter.

The receptacle of the fructifications is prominent in the center of the corolla: the germina are erect, and rotato-articulately ſurround the top of the receptacle: the ſtyles all cohere together at the bottom and form one body with the receptacle; in their upper part they are diſtinct, and are as numerous as the germina, forming ſo many filaments; the ſtigmata are patent and ſlender.

The pericarpium is a capſule, divided into as many cells as there were piſtils; theſe are of various figures in the different genera: the ſeeds are kidney-ſhaped.

Of the Monadelphia, ſome have five ſtamina, others ten, others a great number, according to this obvious diſtinction; they are to be arranged into three orders.

Claſs the Sixteenth. Order the Firſt.

MONADELPHIA PENTANDRIA.

Plants, with the ſtamina, five in number, and cohering together, at their baſe, into one body.

WALTHERIA.

THE ſtyle is ſingle; the capſule is formed of two valves, and contains a ſingle cell, with one ſeed. It approaches to the althæa in appearance, but the characters ſufficiently diſtinguiſh it.

HERMANNIA.

THE ſtyle is ſingle; the capſule contains five cells: the petals are ſemitubular at the baſe.

Hermannia

Hermannia foliis lanceolatis obtuſis ſerratis.
The Hermannia, with lanceolated, obtuſe, ſerrated leaves.

African Marſh Mallows.

The root is long, thick, white, and fibrated; the plant grows up to the form of a little ſhrub; the ſtalks are brown; the leaves large, obtuſely pointed, oblong, of a pale greyiſh-green, and ſerrated at the edges: the flowers are ſmall, yellow, and pendulous.

It is a native of the Cape of Good Hope. Tournefort calls it, Hermannia fruteſcens folio oblongo ſerrato.

MELOCHIA.

THE ſtyles are five in number, and the capſule contains five cells.

Melochia floribus umbellatis, capſulis pyramidatis pentagonis.
The Melochia, with umbellated flowers, and pyramidal, pentagonal capſules.

The root is very thick, oblong, and white,; the plant riſes to ſix feet high; the ſtalk is round, green, and not very thick; the leaves are of an oval figure, lanceolated and ſerrated, and ſtand on pedicles: the flowers ſtand four or five together, in a kind of umbel, on pedicles ariſing oppoſite to the leaves; they are large and red.

It is a native of the Braſils, but is preſerved in our gardens.

Claſs the Sixteenth. Order the Second.

MONADELPHIA DECANDRIA.

Plants with ſtamina ten in number, and cohering together at their baſe.

HUGONIA.

THE ſtyles are three in number: the fruit is a berry containing only one ſeed. Of this genus there is but one known ſpecies.

HUGONIA.

The Hugonia is a ſhrub of eight or ten feet in height; the root is brachiated, and it's bark yellowiſh: the bark of the branches is greyiſh, and they are armed with roburſt thorns: the leaves are obverſely oval, two inches long, and even at the edges: the flowers are yellow, moderately large, and ſtand three or four together at the tops of the branches.

It is a native of the Eaſt Indies. Van Rheede calls it, Modera Canni.

CANNARUS.

THE ſtyle is ſingle; the ſtigma is ſimple; the capſule is formed of two valves, but it contains only one cell, and in that but one ſeed.

Theſe characters ſufficiently diſtinguiſh the Cannarus, without any farther deſcription.

GERANIUM.

THE ſtyle is ſimple, but it has five ſtigmata: the capſule is of the form of a bird's beak. It contains five cells, and in each of them a ſingle ſeed.

1. *Geranium pedunculis simplicibus unifloris.* **Bloody Crane's-bill.**
The Geranium, with simple, single-flowered pedicles.

The root is oblong and slender; the plant grows to five or six inches high; the stalks are slender, weak-jointed, and often, in part, procumbent: the leaves are an inch in diameter, roundish in their circumference, but deeply divided into a multitude of narrow, oblong segments: the flowers are very large, and of a blood-red.

It is a native of England, but is not common. C. Bauhine calls it, Geranium sanguineum maximo flore.

2. *Geranium calycibus monophyllis foliis cordato-orbiculatis, incisis, zona notatis.*
The Geranium, with one-leaved cups, and with cordato-orbiculated, edged leaves.

This species grows to a kind of shrubby form; the stem is thick, brown, and woody: the plant five feet high: the leaves are two inches and a half in diameter, roundish, cordated at the base, hairy, soft to the touch, of a pale green, surrounded with a zone or rim of reddish, of white, or of a dark colour at their edges, and sinuated: the flowers are large, and of a beautiful red; they stand in a kind of umbels, on long pedicles.

It is a native of Africa. Commelin calls it, Geranium Africanum arborescens alchemillæ foliis, floribus rubris.

The other species of this genus are very numerous; they are, 1. The batrachoide, or aconite-leaved Geranium. 2. The small-flowered, aconite-leaved Geranium. 3. The great, broad, aconite-leaved Geranium. 4. The little, purple-flowered, aconite-leaved Geranium. 5. The variegated-flowered Geranium. 6. The black-flowered Geranium. 7. The grumous-rooted Geranium. 8. The great, tuberous Geranium. 9. The silvery, Alpine Geranium. 10. The grey-leaved, thick-rooted Geranium. 11. The shining, round-leaved Geranium. 12. The shining, divided-leaved Geranium. 13. The mallow-leaved Geranium, or dove's foot. 14. The small-flowered, dove's foot Geranium. 15. The divided-leaved, dove's foot Geranium. 16. The great, divided-leaved, dove's foot Geranium. 17. The divided-leaved, dove's foot Geranium, with long pedicles. 18. The marshmallow-leaved Geranium. 19. The thick, rugose-leaved Geranium. 20. The little, betony-leaved Geranium. 21. The herb Robert, or divided-leaved Geranium. 22. The tall, hemloc-leaved Geranium. 23. The hemloc-leaved musk Geranium. 24. The scentless, hemloc-leaved Geranium. 25. The chrysanthemum-leaved Geranium. 26. The Cretic Geranium, with long beaks. 27. The botrys-leaved Geranium. 28. The woolly, thin-leaved Geranium. 29. The chamædrys-leaved Geranium. 30. The thick-rooted, stinking Geranium. 31. The fine-leaved Geranium.

These are the European Gerania: the African shrubby ones wear quite a different face; they are, 1. The mallow-leaved, sweet Geranium. 2. The marshmallow-leaved Geranium. 3. The mallow-leaved, soft, hairy, scentless Geranium. 4. The deeply, sinuated, mallow-leaved Geranium. 5. The alchemilla-leaved, hoary Geranium. 6. The betony-leaved Geranium. 7. The larger-leaved, hairy Geranium. 8. The smooth, large-leaved Geranium.

The African Gerania, with dissected leaves, make another series yet quite different from the former. Of these are, 1. The columbine-leaved, tuberous, and knotty Geranium. 2. The smaller, columbine-leaved, red Geranium. 3. The anemone-leaved Geranium. 4. The narrower, anemone-leaved Geranium. 5. The little red flowered, gooseberry-leaved Geranium. 6. The coriander-leaved Geranium. 7. The larger-flowered, coriander-leaved Geranium. 8. The night-scented, or dusky Geranium. 9. The myrrhis-leaved, African Geranium. 10. The narrower, myrrhis-leaved, African Geranium. 11. The fine, divided-leaved, African Geranium.

Claſs the Sixteenth. Order the Third.

MONADELPHIA POLYANDRIA.

Plants with very numerous ſtamina connected into one body at the baſe.

PENTAPETES.

THE calyx is ſimple: the ſtamina are twenty in number; five of them are very long and ſteril: the cups all contain five cells, and in each a number of membranaceous ſeeds.

Theſe characters ſufficiently diſtinguiſh the Pentapetes, without any farther deſcription.

STEWARTIA.

THE calyx is ſimple; the ſtyle is ſingle, and it's ſtigma is quinquifid: the fruit is a dry apple, conſiſting of five lobes, and having in each a ſingle ſeed.

The characters ſufficiently diſtinguiſh this alſo, without a farther deſcription.

SIDA.

THE calyx is ſimple, angulated, and plicated: the ſtyle is divided into ſeveral parts: the capſules are numerous.

This genus comprehends the Malvinda and Abutilon of authors.

Sida foliis ſubrotundo-cordatis acuminatis. Yellow
The roundiſh, cordated-leaved Sida. Mallow.

The root is ſmall, white, oblong, and fibrated; the ſtalks are round, thick, robuſt, and covered with a thick, woolly down, feeling unctuous and fattiſh: the leaves are large, roundiſh but pointed, and hoary, very ſoft and whitiſh; the flowers are moderately large, and of a beautiful yellow.

It is a native of Ceylon, and alſo of North America. C. Bauhine calls it, Althæa Theophraſti flore luteo; others, Abutilon.

The other ſpecies of Sida are, 1. The maple-leaved, white Sida. 2. The haſtated-leaved Sida. 3. The carpinus-leaved, ſhrubby Sida. 4. The yellow, ſmall-flowered, carpinus-leaved Sida. 5. The ſtellated, alder-leaved Sida. 6. The vine-leaved Sida. 7. The rough-ſtalked Sida. 8. The hoary-podded Sida. 9. The prickly-fruited, ſhrubby Sida. 10. The pyramidal-ſpiked Sida.

NAPÆA.

THE calyx is ſimple, and of an urceolated figure; the ſtyle is divided into ſeveral parts: the fruit is compoſed of five capſules. The characters ſufficiently diſtinguiſh the Napæa from all the other plants of this claſs, without a farther deſcription.

LAVATERA.

THE calyx is double; the exterior one is divided into three ſegments; the fruit is compoſed of numerous capſules.

Lavatera foliis glabris, caule ſcabro, fructibus orbiculo tectis.
The ſmooth-leaved, rough-ſtalked Lavatera, with fruits covered with an orbiculum.

The root is white and long; the ſtalks are hardly erect, ramoſe, rough, and thick: the lower leaves are roundiſh and cordated; the upper ones ſomewhat haſtated or angulated;

gulated; all of them are crenated at the edges: the flowers are very large, and of a fine blood red at the ungues, and of a paler red elſewhere.

It is a native of Syria. C. Bauhine calls it, Malva trimeſtris flore cum unguibus purpureis.

The other ſpecies are, 1. The tree Mallow. 2. The tree Marſhmallow, with acute leaves, and ſmall flowers. 3. The ſmall-flowered, umbellated, Cretic Mallow. 4. The large-leaved Lavatera.

MALVA.

THE calyx is double; the exterior one is compoſed of three leaves: the capſules are numerous, and each contains a ſingle ſeed.

This genus contains the Malva of authors in general, and the Abutilon of Dillenius.

Malva foliis rotundo-angulatis.
The roundiſh, but angulated-leaved, mallow. — **Ivy-leaved Mallow.**

The root is oblong and white; the ſtalk is round, ſmooth, firm, and grows to five feet high: the leaves are ſmooth, large, and ſomewhat reſemble the larger and leſs angulated leaves of ivy: the flowers are very numerous, large, and of a beautiful red.

It is a native of Italy. C. Bauhine calls it, Malva hederaceo folio.

The other ſpecies are, 1. The common, field Mallow. 2. The erect Mallow, with ſmall, white flowers. 3. The common, procumbent, white-flowered Mallow. 4. The curled-leaved Mallow, with cluſtered flowers. 5. The creeping, alcea-leaved Mallow, with deep purple flowers. 6. The red-flowered, African, ſhrubby Mallow. 7. The tricuſpidated-fruited, oriental Mallow. 8. The common, vervain Mallow, or Alcea. 9. The hairy-fruited, vervain mallow. 10. The five-leaved, or hemp-leaved Mallow. 11. The hairy, broad-leaved Mallow. 12. The geranium-leaved, ſea Mallow. 13. The ſmooth, great-flowered Mallow. 14. The elm-leaved Mallow. 15. The roundiſh-leaved, oriental Mallow. 16. The ground-ivy-leaved Mallow.

GOSSYPIUM.

THE calyx is double; the exterior one is compoſed of three leaves: the capſule contains four cells: the ſeeds are ſurrounded with a fine downy matter.

This genus comprehends the Xylon of Tournefort.

Goſſypium foliis quinquelobis.
The Goſſypium, with quinquelobate leaves. — **The Cotton Plant.**

The root is long and fibrated; the ſtalk is hard, woody, and ten feet high: the leaves are large, and are divided more or leſs deeply into five portions or ſegments; they are hairy, and ſtand on long pedicles: the flowers are large, and of a pale yellow, edged with purple.

It is a native of Greece. C. Bauhine calls it, Goſſypium fruteſcens ſemine albo.

The other ſpecies are, 1. The trilobate-leaved Goſſypium. 2. The ſmooth, tree Goſſypium. 3. The prickly, tree Goſſypium. 4. The yellow-flowered, tree Goſſypium. 5. The green-ſeeded, tree Goſſypium. 6. The long-fruited, tree Goſſypium.

MALOPE.

THE calyx is double; the exterior one is formed of three leaves: the fruit is compoſed of a number of conglomerated capſules, each containing a ſingle ſeed.

This genus comprehends the Malacoides of Tournefort.

Malopè

Malope foliis ovatis crenatis glabris.
The ſmooth, oval, crenated-leaved Malope.

Betony-leaved Mallow.

The root is oblong, white, and divaricated; the ſtalks are numerous, procumbent, or oblique, and about ſix inches long: the leaves are few, they ſtand on long pedicles, and are oblong, of a pale green, and like the leaves of betony in figure, but ſmaller: the flowers ſtand on moderately long pedicles, ariſing from the alæ of the leaves; they are like thoſe of the common mallow, and of a pale red.

It is a native of Tuſcany; Moriſon calls it, Malva betonicæ folio; Tournefort, Malacoides betonicæ folio.

The other ſpecies are, 1. The ſmall, blue-flowered, angulated-leaved Malope. 2. The larger-flowered Malope.

URENA.

THE calyx is double: the exterior one is divided into five ſegments; the capſule contains five cells, each holding a ſingle ſeed, and is echinated on the ſurface.

Urena foliis angulatis.
The angulated-leaved Urena.

The root is brachiated and fibrated; the ſhrub is robuſt and ramoſe; the bark brown; the woody part whitiſh, and moderately firm: the leaves are large, and deeply ſinuated; the flowers are moderately large and beautiful.

It is a native of China. Breynius calls it, Trifolio affinis Indiæ orientalis xanthii facie.

ALCEA.

THE calyx is double: the exterior one is divided into ſix ſegments; the fruit is compoſed of numerous capſules, each containing a ſingle ſeed.

Alcea foliis ſinuato-anguloſis.
The ſinuated and angulated-leaved Alcea.

The Holly-hock, or Holy-oak.

The root is long, thick, and white; the ſtalk is round, hairy, robuſt, and grows to ſix, eight, or more, feet in height: the leaves ſtand ſingly on long pedicles; they are large, hairy, roundiſh, and angulated: the flowers are very large and numerous; they ſtand on ſhort pedicles, and are naturally of a pale red colour.

It is a native of the Eaſt. C. Bauhine calls it, Malva roſea folio ſubrotundo.

Culture produces almoſt infinite varieties of it, ſuch as double-flowered, ſingle-flowered, deep red, pale red, white, &c. Holly-hocks. Tournefort, and too many others, have given theſe as ſo many ſpecies, but they are truly all but varieties of this.

The other really diſtinct ſpecies of Alcea are, 1. The fig-leaved, or palmato-digitated-leaved Alcea. 2. The ſmoother and ſmaller-leaved Alcea. 3. The deeply, ſinuated-leaved Alcea. The plants, called by the generality of authors Alceæ, are properly Malvæ or Mallows.

ALTHÆA.

THE calyx is double: the exterior one is divided into nine ſegments: the capſules are numerous, and each contains a ſingle ſeed.

Althæa foliis ſimplicibus tomentoſis.
The ſimple and downy-leaved Althæa.

Common Marſh-mallow.

The root is long, thick, and white; the ſtalk is round, robuſt, and four feet high: the leaves are large, broad, dentated at the edges, and downy, of a whitiſh colour, and ſoft, like velvet, to the touch; the flowers are large and white.

It is common on our ſea-coaſts, and on the banks of rivers, toward their openings into the ſea. A decoction of the root is an excellent diuretic and emollient.

The other ſpecies are, 1. The hemp-leaved Althæa, commonly called hemp-leaved Alcea. 2. The deeply ſinuated, leaved Althæa. 3. The large-flowered, trifid, hairy-leaved Althæa, the Alcea hirſuta of Bauhine.

HIBISCUS.

THE calyx is double: the exterior one is compoſed of a great number of leaves; the capſule contains five cells, and in each of them ſeveral ſeeds.

This genus comprehends the Hibiſcus and Trioccum of Linnæus's Genera Plantarum, the Malvaviſcus of Dillenius, the Ketmia of Tournefort, and the Bammia of Ruppus.

1. *Hibiſcus foliis cordato-quinquangularibus obſolete ſerratis.* **The Chineſe Roſe.**
The Hibiſcus, with cordato-quinquangular, ſerrated leaves.

The root is very large and divaricated; the plant grows to the ſtature of a ſmall tree: the ſtem is woody; the leaves are divided ſomewhat like thoſe of the vine, cordated at the baſe, and ſerrated; they ſtand on long reddiſh pedicles, and are of a pale green on the upper ſurface, and hoary below: the flowers are of the ſize of a large roſe, and of a beautiful red colour.

It is a native of China. Moriſon calls it, Althæa arborea roſa Chinenſis; Ferrarius, Roſa Sinenſis.

2. *Hibiſcus foliis cordato-peltatis ſeptemangularibus ſerratis hiſpidis.* **Abelmoſch.**
The Hibiſcus, with rough, ſerrated, cordato-peltated, and ſeptangular leaves.

The root is long and white; the ſtalk is robuſt, hairy, and green; the leaves are rough to the touch, ſerrated, and deeply angulated: the flowers are not very large; they are yellow, and of a perfumed ſcent: the ſeed is much ſweeter.

It is a native of Egypt, the Eaſt Indies, and America. C. Bauhine calls it, Alcea Ægyptiaca villoſa. The ſeeds of it were once kept in our ſhops as a provocative and cordial, but they are now out of uſe.

3. *Hibiſcus foliis tripartitis inciſis, calycibus inflatis.* **Bladder Alcea.**
The tripartite-leaved Hibiſcus, with inflated cups.

The root is oblong and white; the ſtalks are numerous, round, and weak; the leaves are ſmooth, and deeply divided into ſegments, which are ſerrated on their edges: the flowers are large and yellow, with a black bottom: the fruit is compoſed in an inflated, open cup.

It is a native of Italy. C. Bauhine calls it, Alcea veſicaria; Linnæus, Trioccum.

4. *Hibiſcus foliis ovatis acuminatis ſerratis, caule ſimpliciſſimo.* **Elm-leaved Ketmia.**
The oval, acuminated, ſerrated-leaved, ſimple-ſtalked Hibiſcus.

The root is very long, tough, and white; the ſtalk is erect, ſimple, round, hollow, and of a pale green; the leaves are ſomewhat like thoſe of the mulberry-tree, of a bright green on the upper ſide, and whitiſh and hoary underneath: the flowers are very large, and of a pale red, and ſtand at the tops of the ſtalks.

It is a native of Africa and America. Tournefort calls it, Ketmia populi folio.

The other ſpecies of Hibiſcus are, 1. The common, ſmooth-leaved Ketmia of authors. 2. The ſmooth-leaved, yellow Ketmia. 3. The poplar-leaved Ketmia. 4. The lime-leaved Ketmia. 5. The hemp-leaved Ketmia. 6. The rough-ſtalked Ketmia. 7. The haſtated-leaved Ketmia. 8. The vine-leaved Ketmia. 9. The fig-leaved

Hibiſcus,

Hibiſcus. 10. The great, white-flowered, prickly Hibiſcus. 11. The cordated-leaved Hibiſcus.

CAMELLIA.

THE calyx is imbricated, and compoſed of ſeveral leaves, the interior of which are the larger.

It is an oriental, deſcribed by Kœmpfer, in his Japan, p. 850. The characters ſufficiently diſtinguiſh it, without a farther deſcription.

Claſs the Seventeenth.

DIADELPHIA.

Plants which have their antheræ placed on two ſeparate ſtands.

This Claſs comprehends the Papilionaceæ of Tournefort, the Leguminoſæ of Ray.

The claſſical characters are theſe:

THE calyx is a perianthium, formed of a ſingle leaf, decaying very ſoon, and of a campanulated figure: it's baſe is gibbous, and is affixed to the pedicle by it's under ſurface; above, it is obtuſe, and contains a honey-juice: the rim is divided into five parts, acute, erect, oblique, and unequal: the lower ſegment, which has no fellow, is longer than the others; the upper pairs are ſhort and ramoſe: the baſe, which is always wet with a honey-dew, contains the receptacle. The corolla is papilionaceous, or of the figure of a butterfly, and is unequal in it's parts: the ſeveral petals, which are four in number, are diſtinguiſhed each by it's peculiar name. The vexillum is a petal, which covers the others; it is large, incumbent, and of a plano-horizontal figure; it's unguis is inſerted into the upper edge of the receptacle; when out of the cup, it approaches to a roundiſh figure; it is nearly entire, and has a line elevated above the reſt of the ſurface, running all along it, and moſt viſible near it's apex, giving an appearance of this petal's being compreſſed downwards; the part of this petal that comes neareſt the baſe approaches to a ſemicylindric figure, and, in ſome degree, embraces the petals that are under it; the diſk of this petal is depreſſed on each ſide, but the two ſides, near their edges, turn upwards; where the half of the tube terminates at the explication of half of the limb, there are, behind, two hollow impreſſions, prominent below; theſe compaſs the alæ, which are ſubulated under them. The alæ are a pair of petals, one placed at each ſide of the corolla; they are placed under the vexillum; the margin is incumbent, and the ſides perpendicular; they are of a roundiſh, oblong figure, broadeſt externally, and have their upper edge nearly ſtrait, their lower ſwelling into a kind of roundneſs; the baſe of each is bifid: the lower portion of this bifurcation is extended into an unguis, which is inſerted into the ſide of the receptacle, and is of about the length of the cup: the upper portion is ſhorter, and is bent. The carina is the loweſt petal, it is often divided into two portions; it is ſituated between the alæ, under the vexillum; it is of the ſhape of a boat, hollowed, and it's ſides compreſſed: it's baſe is mutilated, and it's lower part is extended into an unguis, of the length of the cup, and inſerted into the receptacle; it's lateral and upper ſegments are ſhorter, and are implicated with the like parts of the alæ: the ſides of the carina, in figure, much reſemble the alæ, and their ſituation is alſo like, except that it is lower, and more inward. The linea carinalis, or line of the carina, is continued nearly ſtrait to about the middle of the petal, and, from this part to it's extremity, it riſes into a ſegment of a circle: the linea marginalis is continued ſtrait to the very extremity, where it terminates, after joining obtuſely with the carinal line. The ſtamina, called diadelphous, are two filaments, unlike to one another; the one of them is ſituated below, and involves the piſtil; the other is ſituated above, and lies upon the piſtil. The lower filament ſurrounds the germen; it's loweſt half is membranaceous, cylindric, and opens longitudinally upwards; from hence it terminates in nine ſubulated parts, which, in their length and flexure, reſemble the ſhape of the carina; the intermediate radii are in pairs,

pairs, alternately longer. The upper filament is of a ſubulato-ſetaceous form, and covers the fiſſure of the cylindric part of the former filament; it is ſimple, incumbent, and anſwers to the ſituation of the former, and is ſhorter than it; it opens from the other at it's baſe, and, by this means, gives paſſage to a honey-like juice. The antheræ, in the whole, are uſually ten: there is only one on the upper filament, but the lower one has nine, an anthera ſtanding on every one of it's radii; they are ſmall, equal in ſize, and terminate the filaments. The piſtil is ſingle; it ariſes from the receptacle, within the calyx. The germen is oblong, nearly cylindric, but ſomewhat compreſſed, ſtrait, and of the length of the cylindric part of the lower filament, which incloſes it. The ſtyle is filiform, but ſomewhat ſubulated; it is aſcendent, and is of the ſame length and ſituation with the radii of the filament, among which it is placed; it endures but a ſhort time, periſhing with the corolla, or ſoon after. The ſtigma is hoary, of the length of the ſtyle, and is turned upwards, and placed immediately underneath the antheræ. The fruit is an oblong, compreſſed, obtuſe pod, or legumen, formed of two valves, with two longitudinal ſutures, an upper and an under one, both ſtrait, but the upper one deſcending at the baſe, and the lower one aſcending at the apex: the pod opens at it's upper ſuture. The ſeeds are uſually ſeveral, ſometimes ſmall, roundiſh, ſmooth, and pulpy; they are pendulous in the pod, and have a prominent embryo near their place of inſertion: when the ovular are excluded, the cotyledons preſerve the figure of halves of the ſeed. The peculiar, or proper, receptacles of the ſeeds are very ſmall, ſhort, and attenuated at the baſe, obtuſe at the diſk, oblong, and are inſerted longitudinally and alternately along the upper upper ſuture of the pod; the two valves being ſeparated, one half of the ſeeds therefore adheres to one, the other half to the other.

The carina in many of the flowers of the plants of this claſs is, in reality, compoſed of two petals, with their edges approximated, but not joined; but theſe carry all the appearance of it's being formed of a ſingle petal, as in the others, till carefully ſeparated.

Of the Diadelphia ſome have ſix, ſome eight, ſome ten antheræ in each flower; they may be, therefore, arranged into three orders.

Claſs the Seventeenth. Order the Firſt.

DIADELPHIA HEXANDRIA.

Plants with ſix antheræ and two kinds of ſtamina.

FUMARIA.

THE ſtamina are two, of a membranaceous ſtructure, and trifid.

This genus comprehends the Fumaria, Capnoides, Cyſticapnos, Corydalis, Pſeudo-fumaria, and Cucularia of authors.

Fumaria ſiliquis paniculatis linearibus, caule erecto. — Evergreen, podded Fumitory.

The erect Fumaria, with paniculated, linear pods.

The root is fibrous: the plant riſes to a foot high: the ſtalk is round, erect, ſlender, hollow, and covered with a greyiſh powder, which eaſily falls off, on rubbing; the leaves are divided into a number of ſhort, obtuſe ſegments, and are of a bluiſh colour: the flowers are ſmall, of a variegated red and yellow colour, and ſtand in cluſters, at the tops of the branches.

It is a native of America. Tournefort calls it, Capnoides; Cornutus and others, Fumaria filiquoſa ſemper virens.

The other ſpecies are, 1. The common Fumitory. 2. The fine-leaved Fumitory. 3. The climbing Fumitory. 4. The great, fine-leaved Fumitory. 5. The Fumitory, with leaves divided into very long ſegments. 6. The little, ſophia-leaved Fumitory. 7. The broad-leaved, climbing Fumitory. 8. The cordated-leaved Fumitory. 9. The red-flowered, hollow-rooted Fumitory. 10. The yellow-flowered, hollow-rooted Fumitory.

Fumitory. 11. The green-flowered, hollow-rooted Fumitory. 12. The ſolid, tuberous-rooted Fumitory. 13. The large-leaved Fumitory. 14. The great-flowered, obtuſe-ſegmented Fumitory. 15. The ſmaller-flowered Fumitory.

Claſs the Seventeenth. Order the Second.

DIADELPHIA OCTANDRIA.

Plants with eight antheræ on two kinds of filaments.

POLYGALA.

THE calyx is compoſed of five leaves, two of which reſemble the alæ, and are coloured.

This genus comprehends the Polygaloides, Chamæbuxus, and Penæa of authors.

Polygala foliis lineari-lanceolatis, caulibus diffuſis. **Common Milkwort.**
The diffuſe-ſtalked Polygala, with lineari-lanceolate leaves.

The root is oblong, ſlender, and white: the ſtalks are numerous, procumbent, round, hard, and ſlender, and grow to four, ſix, or eight inches long: the leaves are about a third of an inch long, broader at the lower part of the ſtalk, and narrower towards the top of it; they are ſmooth, and of a bright green colour: the flowers form a kind of ſpikes, at the tops of the branches; they are moderately large, and naturally blue, but often red or white: the plant alſo is, ſometimes, larger, and more erect, ſometimes ſmaller, and more procumbent; and, under theſe ſeveral appearances, authors have made ſix or eight different ſpecies of it, as the red-flowered, the white-flowered, the myrtle-leaved, &c. Polygala.

It is common in our paſtures. C. Bauhine calls it, Polygala vulgaris.

The other really diſtinct ſpecies are, 1. The pointed-leaved, taller Polygala. 2. The variegated-flowered, very narrow, and long-leaved Polygala. 3. The little-leaved, large flowered Polygala. 4. The great, ſhrubby, African Polygala. 5. The graſſy-leaved, ſhrubby Polygala. 6. The great-flowered, flax-leaved, African Polygala. 7. The yellow, box-leaved, ſhrubby Polygala. 8. The American, long-leaved, white Polygala.

HEISTERIA.

THE calyx is compoſed of five leaves, and thoſe nearly equal, and regularly arranged. This ſingular ſtructure of the calyx diſtinguiſhes the Heiſteria ſufficiently from all the other genera of this claſs, without a farther deſcription.

Claſs the Seventeenth. Order the Third.

DIADELPHIA DECANDRIA.

Plants which have ten antheræ on two kinds of ſtyles.

OF the Diadelphia Decandria there are many more genera than of either of the former ſeries; and of theſe ſome have the filaments connected at their baſes; others have the ſtigmata hoary, and the filaments not connected at their baſes; others have the cups bilabiate, and the ſtigmata not hoary, nor the filaments connected; and, finally, others have the ſtigmata ſimple, not hoary, the filaments not connected, and the cups not bilabiate: they may hence be arranged into four ſeparate diviſions.

Division the First.

DIADELPHIA DECANDRIA.

Which have their filaments connected at their bases.

ERYTHRINA.

THE calyx is divided into two lips: the vexillum of the corolla is very long and lanceolated.

This genus comprehends the Corallodendron and Coral of authors.

Erythrina foliis ternatis, caule spinoso. **The Coral-tree.**
The Erythrina, with ternate leaves, and thorny branches.

The root is brachiated: the tree grows to twenty-five feet high: the branches are armed with sharp thorns, especially on the younger trees: the leaves are broad, short, and somewhat cordated; they grow three on each pedicle, and several of these aggregations from the whole compound leaf: the flowers are very large, and of a fine scarlet colour.

It is a native both of the East and West Indies. Tournefort calls it, Corallodendron triphyllum Americanum spinosum, flore ruberrimo.

The other species are, 1. The black-seeded, trifoliate Erythrina. 2. The large-leaved Erythrina. 3. The ash-leaved Erythrina. 4. The single, oblong-leaved, and flat-podded Erythrina. 5. The yellow-flowered, pseudo-acacia-leaved Erythrina. 6. The smaller-leaved Erythrina.

SECURIDACA.

THE calyx is bilabiated: the pod is of a roundish figure, containing only a single seed, and terminating in a large ala, of an oval figure.

These characters sufficiently distinguish the Securidaca, without a farther description.

LUPINUS.

THE calyx is bilabiated; five of the antheræ are roundish, and the other five oblong; the pod is coriaceous.

Lupinus calycibus verticillatis, labio inferiore trifido. **Yellow Lupine.**
The Lupine, with verticillate cups, and the lower lip trifid.

The root is fibrous: the stalk is round, hairy, ramose, and two feet high: the leaves are digitated, oblong, narrow, hoary on both sides, and terminate in a point: the flowers are large, yellow, and sweet; they stand at the tops of the stalks, in form of a long spike.

It is a native of Italy. C. Bauhine calls it, Lupinus sylvestris flore luteo.

The other species are, 1. The common, blue Lupine, with it's varieties. 2. The great, very hairy, blue Lupine. 3. The broad-leaved Lupine. 4. The narrow-leaved, purple Lupine. 5. The tall, narrow-leaved, blue Lupine. 6. The blue, perennial, creeping Lupine. 7. The little, East Indian Lupine. 8. The composite-stalked, white-flowered, garden Lupine, the seeds of which are kept in the shops.

CROTALARIA.

THE calyx is divided into three parts: the pod is turgid, inflated, and has a pedicle.

Crotalaria foliis ternatis, petiolis nudis.
The ternate-leaved Crotalaria, with naked petioles.

The root is oblong, ſmall, and fibrated: the ſtalk is round, ſmooth, four feet high, and ramoſe: the leaves are an inch long, of a roundiſh figure, and of a yellowiſh-green colour; they ſtand three on every pedicle, and are hoary: the flowers are moderately large, and of a yellowiſh-green; they ſtand in a kind of ſpikes, at the tops of the ſtalks.

It is a native of America. Ray calls it, Crotalaria fruticoſa fructu pubeſcente.

The other ſpecies are, 1. The lanceolate-leaved Crotalaria. 2. The ſmall-flowered Crotalaria. 3. The dwarf Crotalaria.

GENISTA.

THE calyx is formed into two lips: the vexillum of the corolla is oblong, and is totally reflected from the carina.

This genus comprehends the Spartium and Geniſtella of Tournefort, but not the Geniſta of Tournefort and others, that being the Spartium.

Geniſta foliis lanceolatis, ramis teretibus ſtriatis.
The lanceolate-leaved Geniſta, with round, ſtriated branches.

Green-Weed, or Dyers-Weed.

The root is woody, divaricated, and ſpreading: the ſtalks are numerous, tough, round, ſtriated, and two feet high: the leaves are oblong and narrow, of a deep green colour, and ſmooth: the flowers are large and yellow, and ſtand in large tufts, at the tops of the branches.

It is common in our paſtures. C. Bauhine calls it, Geniſta tinctoria: the dyers uſe it for a green and a yellow.

The other ſpecies are, 1. The ramoſe, hypericum-leaved Geniſta. 2. The prickly, lanceolate-leaved Geniſta. 3. The herbaceous Geniſta, or Chamæſpartium of authors. 4. The larger, prickly Geniſta. 5. The hairy and prickly Geniſta. 6. The woolly-headed, very prickly Geniſta. 7. The Geniſta, with very long and ſlender, tridentated points. 8. The ſhorter, tridentated-ſpined Geniſta. 9. The crooked, tridentated, prickled Geniſta. 10. The cluſter-flowered Geniſta. 11. The very ſhort, bluiſh-ſpined Geniſta. 12. The ſmall-flowered Geniſta. 13. The little-ſpiked Geniſta. 14. The broad-leaved Dyers-weed. 15. The ſhrubby, narrow-leaved Dyers-weed. 16. The ſhrubby, broad leaved Dyers-weed.

SPARTIUM.

THE ſtigma is longitudinal and hairy in it's upper part: the filaments adhere to the carina: the calyx ſtands oblique downwards.

This genus comprehends the Geniſta of authors.

Spartium ramis oppoſitis teretibus, verſus apicem floriferis, foliis lanceolatis.
The oppoſite, round-branched Spartium, with lanceolate leaves.

Spaniſh Broom.

The root is brachiated: the ſhrub riſes to ſix or eight feet high: the ſtem is brown, the twigs green, round, and tough: the leaves are oblong, and quickly fall off: the flowers are large and yellow, and ſtand in cluſters, at the tops of the branches.

It is a native of Spain, Italy, and France. J. Bauhine calls it, Geniſta juncea.

The other ſpecies are, 1. The dwarf, ſweet Spartium. 2. The ſmall-flowered Spartium. 3. The butchers-broom-leaved Spartium. 4. The lavender-leaved Spartium. 5. The roſemary-leaved Spartium. 6. The little, blue-flowered Spartium. 7. The ſilvery-branched Spartium. 8. The purple, narrow-leaved Spartium. 9. The larix-leaved Spartium. 10. The hairy, larix-leaved Spartium. 11. The ſhrubby, ſpiked, larix-leaved Spartium. 12. The ſhrubby, capitated, larix-leaved Spartium. 13. The yellow,

yellow, ſpiked, larix-leaved Spartium. 14. The ſhort, larix-leaved Spartium, with downy heads. 15. The camphorata-leaved Spartium, with very ſmall, yellow flowers. 16. The gallium-leaved Spartium.

BORBONIA.

THE ſtigma is emarginated: the calyx is acuminato-ſpinoſe: the pod is pointed at the extremity. Theſe characters ſufficiently diſtinguiſh the Borbonia, without a farther deſcription.

ACHYRONIA.

THE ſtigma is acute; the pod is turgid and hairy: the vexillum is obtuſe, but pointed. The characters, alſo, ſufficiently diſtinguiſh this genus, without a farther deſcription.

ONONIS.

THE calyx is divided into five linear ſegments; the pod is turgid and ſeſſile. This genus comprehends the Ononis of Tournefort, and the Natrix of Rivinus.

Ononis pedunculis unifloris ſeta terminatis. **Yellow**
The ſingle-flowered Ononis, with hairy peduncles. **Reſtharrow.**

The root is long, tough, and creeping: the ſtalks are numerous, round, a foot and a half high, very ramoſe, and without thorns: the leaves are ſmall, oblong, pointed, and of a pale green colour: the flowers are large and yellow, and ſtand one on each peduncle.

It is a native of France and Italy. C. Bauhine calls it, Ononis viſcoſa ſpinis carens lutea major.

The other ſpecies are, 1. The common, prickly Ononis. 2. The common Ononis, without prickles. 3. The little, procumbent Ononis, without ſpines. 4. The roundiſh-leaved, perennial Ononis. 5. The early-flowering, purple, ſhrubby Ononis. 6. The tridentate, fleſhy-leaved, ſhrubby Ononis. 7. The dwarf, great-rooted Ononis. 8. The little, ſmooth, purple Ononis. 9. The long-ſpiked, alopecuroide Ononis. 10. The hairy, procumbent, ſea Ononis. 11. The purple, ſhrubby, American Ononis. 12. The broad-leaved, yellow Ononis. 13. The narrow-leaved, variegated, ſea Ononis. 14. The large, yellow-flowered, ſhrub Ononis. 15. The little, yellow-flowered Ononis. 16. The Aſiatic, ſhrub Ononis, with great yellow flowers. 17. The broader, or roundiſh-leaved Ononis. 18. The climbing, yellow-flowered Ononis.

GALEGA.

THE calyx is divided into five ſetaceous ſegments: the pod is cylindric, and very long.

Of this genus there is but but one known ſpecies.

GALEGA. **Goat's-rue.**

The root is oblong, white, and fibrated: the plant riſes to three feet high: the ſtalks are ſtriated and hollow: the leaves are compoſed each of a great many pairs of oblong pinnæ: the flowers are moderately large, and of a bluiſh-white colour; they ſtand in long ſpikes, on pedicles ariſing from the alæ of the leaves.

It is a native of Italy. C. Bauhine calls it, Galega vulgaris.

The flowers are ſometimes altogether white, and ſometimes larger than ordinary: Tournefort has made two new ſpecies from theſe varieties.

It has been eſteemed a great ſudorific, but at preſent is little uſed.

ANTHYLLIS.

THE calyx is inflated, and divided into five ſhort ſegments at the extremity, and covers the pod.

This genus comprehends the Vulneraria of Tournefort and others.

Anthyllis herbacea foliis quaterno-pinnatis floribus, lateralibus **Bladder Lotus.**
The lateral-flowered, quaterno-pinnate-leaved Anthyllis.

The root is fibrous; the ſtalks are numerous, procumbent, and grow to a foot in length: the leaves ſtand at ſmall diſtances; they are compoſed each of two pairs of little pinnæ, and a large oval terminatory one; the flowers ſtand on ſhort pedicles, ariſing from the alæ of the leaves; they are little and yellow, but their cups large and inflated like bladders.

It is a native of Italy. C. Bauhine calls it, Lotus pentaphyllus veſicarius.

The other ſpecies are, 1. The common, yellow Anthyllis. 2. The purple-flowered Anthyllis. 3. The broader-leaved Anthyllis. 4. The Anthyllis, called yellow, hoary, Barba Jovis. 5. The Anthyllis, called common Barba Jovis.

AMORPHA.

THE vexillum of the corolla is of an oval figure, and hollow. There are no alæ nor carina in this ſingular genus. There is but one known ſpecies.

AMORPHA.

The root is brachiated and fibrated; the ſhrub riſes to four or five feet high: the branches are ſlender; the leaves large and pinnated; they ſomewhat reſemble thoſe of the common acacia: the flowers are very ſmall and purple.

It is a native of South America. Miller calls it, Barba Jovis pſeudo-acaciæ foliis, floſculis purpureis minimis.

Claſs the Seventeenth. Order the Third.

Diviſion the Second.

Diadelphia Decandria, with hoary ſtigmata, and filaments not connected at the baſe.

ANAGYRIS.

THE vexillum of the flower is ſhorter than the alæ, and the alæ are ſhorter than the carina.

Anagyris floribus lateralibus. **Stinking Bean Trefoil.**
The Anagyris, with lateral flowers.

The root is brachiated and fibrated; the trunk is thick, woody, and covered with a brown bark; it grows to twenty feet high, and ſometimes forms a regular tree, though more uſually it is a ſhrub: the leaves are oblong and hoary; on the under ſide they ſtand three on each pedicle: the flowers are numerous, and of a beautiful yellow.

It is a native of Italy. C. Bauhine calls it, Anagyris fœtida.

There is but one other known ſpecies of this genus, the narrower-leaved Anagyris.

ROBINIA.

THE vexillum of the corolla is patent, reflex, and roundiſh; the calyx is divided at the extremity into four ſhort ſegments; the upper one is emarginated.

This genus comprehends the Pſeudo-acacia of Tournefort and Rivinus.

Robinia pedunculis racemosis, foliis pinnatis.
The pinnated-leaved Robinia, with racemous peduncles.

The root is large and spreading; the tree grows to forty feet high; the branches are covered with a smooth bark, and have very robust and sharp spines: the leaves are pinnated; the pinnæ are short and broad, and there are eight or ten pairs of them in each leaf: the flowers are large and white.

It is a native of Virginia. Boerhaave calls it, Pseudo-acacia siliquis glabris; Linnæus, Robinia aculeis geminatis.

The other species are, 1. The Robinia, with oblong pinnæ. 2. The Robinia, with quaternate pinnæ. 3. The yellow-barked, quaternate-leaved Robinia.

OROBUS.

THE style is of a linear figure; the calyx is obtuse at the base; the upper segments are short.

Orobus caule simplicissimo, foliolis pluribus lanceolatis oblongis.
The simple-stalked Orobus, with numerous, oblong, lanceolate foliola.

The root is fibrous; the stalks are weak, slender, striated, and of a pale green: the leaves are pinnated; the pinnæ are numerous, smooth, oblong, and pointed: the flowers are moderately large and purple.

It is common in most parts of Europe. C. Bauhine calls it, Astragalus sylvaticus foliis oblongis glabris.

The other species are, 1. The common, purple, spring Orobus. 2. The narrower-leaved, pale red Orobus. 3. The broad-leaved, purple Orobus. 4. The narrow-leaved, tuberous-rooted Orobus. 5. The vetch-leaved Orobus. 6. The common hedge Orobus. 7. The nervous-leaved Orobus. 8. The scarlet and black seeded, American Orobus. 9. The narrow-leaved, pale-flowered Orobus.

LATHYRUS.

THE style is plane, and broadest in the upper part; the two upper segments of the cup are shorter than the others.

This genus comprehends the Clymenum and Aphaca of Tournefort, as well as his Lathyrus.

Lathyrus pedunculis multifloris, cirris diphyllis, foliolis ovalibus, radice tuberosa.
The tuberous rooted, many-flowered Lathyrus, with oval leaves.

Pease Earth-nut.

The root consists of a number of long filaments, to which, in several parts, are annexed large tuberosities of an oblong or roundish figure, and white, tender substance: the stalks are weak and procumbent, unless supported; they grow to two feet long: the leaves are placed two on a pedicle, which terminates in a tendril; they are an inch long, oval, and obtuse: the flowers are numerous, large, and purple.

It is a native of most parts of Europe. C. Bauhine calls it, Lathyrus arvensis repens tuberosus.

The other species are, 1. The large, garden Lathyrus. 2. The great, wild Lathyrus. 3. The broad-leaved, great-flowered Lathyrus. 4. The great, narrow-leaved Lathyrus. 5. The orobus-podded, scarlet-flowered Lathyrus. 6. The very narrow-leaved, American Lathyrus. 7. The purple and yellow Lathyrus. 8. The blue-flowered, annual Lathyrus. 9. The broad-leaved, yellow Lathyrus. 10. The narrow-leaved Lathyrus, with a jointed hairy pod. 11. The very narrow-leaved, red-flowered, round-seeded Lathyrus. 12. The angular-seeded, narrow-leaved Lathyrus. 13. The capillaceous-leaved Lathyrus. 14. The scarlet-flowered, grassy Lathyrus.

Of thoſe called Clymena there are, 1. The flat-podded Clymenum. 2. The articulated-podded Clymenum. 3. The blue-flowered Clymenum.

Of the Aphaca of authors, there is but one ſpecies, viz. the yellow-flowered, bindweed-leaved Lathyrus.

PISUM.

THE ſtyle is triangular, and carinated in it's upper part: the two upper ſegments of the cup are the ſhorter.

This genus is very nearly allied to the former; it contains the Piſum and the Ochrus of authors.

Piſum petiolis decurrentibus membranaceis diphyllis.
The Piſum, with membranaceous, decurrent petioles, with two leaves on each.

The root is fibrous; the plant grows to three feet high, if ſupported; the ſtalks are green, angular, and ſlender; the leaves are oblong, broad, and of a pale green: the flowers are large, and of a pale yellow; they ſtand on ſhort pedicles, ſingly, in the alæ of the leaves.

It is a native of Italy. C. Bauhine calls it, Ochrus folio integro.

The other ſpecies are, 1. The common Pea, from the ſeveral varieties of which Tournefort and others have made ſeveral imaginary ſpecies; as the green pea, the umbellated pea, the dwarf Pea, the ſquare Pea, and the like. 2. The angulated-leaved Pea. 3. The broader-leaved Pea. 4. The yellow, woolly, American Ochrus.

VICIA.

THE ſtigma is barbated on the lower ſide.

This genus comprehends the Cracca of Rivinus, and the Faba of Tournefort, &c.

Vicia pedunculis multifloris, foliolis ovatis, infimo pari caulino.
The many-flowered Vicia, with oval leaves, the loweſt pair cauline.

The root is oblong, black, and woody; the plant much reſembles the common pea: the ſtalks are numerous, angulated, ſtriated, and tough: the leaves ſtand pretty cloſe; two broad ones, of an inch in length, ſurround the ſtalk, and from theſe a pedicle runs to three inches in length, with about three pairs of pinnæ on it, and terminating in a tendril: the flowers are ſmall and white, and ſtand in large cluſters on long peduncles.

It is a native of Italy. C. Bauhine calls it, Piſum perenne.

The other ſpecies are, 1. The common Vicia or Tare. 2. The great, buſh Vetch. 3. The rounder-leaved, buſh Vetch. 4. The pointed-leaved Vetch. 5. The many-flowered Vetch. 6. The hoary, many-flowered Vetch. 7. The white-flowered, hairy Vetch. 8. The early, red-flowered Vetch. 9. The many-podded, hairy Vetch. 10. The ſingle and ſmooth-podded Vetch. 11. The long-leaved and long-podded Vetch. 12. The broad-podded, purple-flowered Vetch. 13. The Vetch, which buries it's pods under-ground. 14. The little, early-flowering Vetch. 15. The broad-leaved, procumbent Vetch. 16. The broad and ſerrated-leaved, procumbent Vetch. 17. The pea-leaved Vetch. 18. The yellow-flowered Vetch, with hairy pods. 19. The yellow, ſmooth-podded Vetch. 20. The two-podded Vetch.

Of thoſe called Fabæ Beans there are, 1. The common, garden Bean. 2. The ſmaller-fruited Bean, with ſerrated leaves, called the Narbon Vetch.

Authors have made many other imaginary ſpecies, out of the varieties of the common Bean: the leſſer Bean, called the Horſe-bean, is evidently but a variety of it.

COLUTEA.

THE pod is inflated, and opens at the upper part of the baſe; the calyx is bilabiate.

Colutea foliis obverſe cordatis, caule arboreo.
The tree Colutea, with obverſely, cordated leaves.

The root is brachiated; the trunk is woody and hollow: the branches are numerous; the leaves are long, pinnated, and of a bright green: the pinnæ ſhort and hairy underneath: the flowers are very numerous; they hang on long pedicles in cluſters, and are moderately large and yellow; the pods are inflated in manner of a bladder.

It is a native of Italy. It grows on the top of Veſuvius, where there is no other vegetable. C. Bauhine calls it, Colutea veſicaria.

The other ſpecies are, 1. The ſhrubby, purple-flowered Colutea. 2. The dwarf, Syrian, purple Colutea.

DOLICHOS.

THE baſe of the vexillum has two oblong, parallel, callous bodies, preſſing the alæ.

This genus is nearly allied to the Phaſeolus; but in that the Carina is ſpiral, and it is not ſo in this.

Dolichos leguminibus ovato-acinaciformibus, ſeminibus ovatis, hilo arcuato verſus altam extremitatem.
The ovato-acinaciform, podded Dolichos, with oval ſeeds, ridged toward one end.

The root is ſpreading; the ſtalk is firm and woody, but climbs upon trees, and any thing that is near it: the leaves are large, broad, and pointed, and reſemble thoſe of the common Phaſeolus: the flowers are large and white; the pods are long; the ſeeds are like thoſe of our kidney-beans, but have a ridge near one end.

It is a native of Egypt, where it is uſed in food. J. Bauhine calls it, Phaſeolus lablab Alpini.

The other ſpecies of Dolichos are, 1. The purple-flowered, ſlender-podded Dolichos. 2. The dwarf, yellow Dolichos.

PHASEOLUS.

THE carina of the flower, as alſo of the ſtamina and ſtyle, are twiſted ſpirally.

Phaſeolus corollis coccineis.
The ſcarlet-flowered Phaſeolus.

The root is fibrous; the ſtalk is weak, climbing, and four or five feet long; the leaves ſtand three on each pedicle; they are broad at the baſe, and terminate in a point; the flowers are large, and of a bright ſcarlet.

It is a native of America. Cornutus calls it, Phaſeolus puniceo flore; Moriſon, Phaſeolus Indicus flore coccineo.

The other ſpecies are, 1. The common, garden Phaſeolus, or Kidney-bean, with it's ſeveral varieties in the colour of the ſeeds, from which Tournefort and others have made ſeveral ſpecies. 2. The dwarf, black, Italian Phaſeolus. 3. The Ceylon Phaſeolus, with radiated pods. 4. The ivy-leaved, woolly-ſeeded Phaſeolus. 5. The broad-fruited Phaſeolus. 6. The yellow-flowered, Egyptian Phaſeolus. 7. The narrow-leaved Phaſeolus. 8. The little-leaved Phaſeolus. 9. The yellow-podded Phaſeolus. 10. The cochleated-flowered Phaſeolus. 11. The vetch-leaved, oval-podded Phaſeolus. 12. The very long-podded Phaſeolus. 13. The dwarf, red-flowered, African Phaſeolus. 14. The purple-flowered, tuberous-rooted, American Phaſeolus.

ſeolus. 15. The yellow, ſtrumous-rooted Phaſeolus. 16. The great-podded, American Phaſeolus. 17. The great-flowered, American Phaſeolus. 18. The hairy Phaſeolus, with jointed pods. 19. The falcated-podded Phaſeolus. 20. The pyramidal-ſpiked Phaſeolus, with red and black ſeeds. 21. The round-leaved, purple, ſea Phaſeolus. 22. The hairy-podded, American Phaſeolus.

Claſs the Seventeenth. Order the Third.

Diviſion the Third.

Diadelphia Decandria, with bilabiated cups; the ſtigmata not hoary, and the ſtamina not growing together at the baſe.

ULEX.

THE calyx is compoſed of two leaves; the pod is ſcarce longer than the cup.

The plants of this genus have been confounded with the Geniſta and Geniſta Spartia by authors.

Ulex folio ſub ſingulis ſpinis ſubulato-plano acuto.
The Ulex, with a plano-ſubulated, acute leaf under every ſpine.

The Furze-Buſh.

The root is long and divided; the trunk is firm, woody, and covered with a brown bark; the young branches are green, flexible, and beſet with numerous thorns: the ſhrub grows to three, four, or more, feet high; the leaves are ſmall, and fall off very ſoon; the flowers are large, yellow, numerous, and beautiful.

It is common on our heaths. C. Bauhine calls it, Geniſta ſpinoſa major longioribus aculeis.

The other ſpecies are, 1. The arboreſcent, larger-leaved, African Ulex. 2. The red-flowered Ulex. 3. The ſhorter-ſpined, common Ulex. 4. The ſlender-ſpined Ulex. 5. The ſmall-flowered Ulex.

CITYSUS.

THE calyx is bilabiate; the pod is attenuated at the baſe.

This genus comprehends the Cytiſus of Tournefort, and the Laburnum of Rivinus.

Cytiſus foliis ovato-oblongis, racemis ſimplicibus pendulis.
The ovato-oblong-leaved Cytiſus, with ſimple, pendulous cluſters.

The not ſtinking Bean Trefoil.

The root is ſpreading; the tree grows to five and twenty feet high, and is very ramoſe: the wood is firm and hard; the bark of the young branches is green: the leaves ſtand on hairy pedicles; they are two inches long, and more than an inch broad, obtuſe at the end, and hoary underneath: the flowers are moderately large and yellow; they hang in cluſters, on long pendulous peduncles.

It is a native of Italy. C. Bauhine calls it, Anagyris non fœtida major ſive Alpina; Tournefort, Cytiſus flore racemoſo pendulo.

The other ſpecies are, 1. The reddiſh, hoary Cytiſus. 2. The long-podded, hoary Cytiſus. 3. The great, hoary, yellow Cytiſus. 4. The ſmall-leaved, hoary Cytiſus. 5. The roundiſh-leaved, ſhort-pedicled Cytiſus. 6. The ſmooth, green Cytiſus. 7. The narrow, complicated, hoary Cytiſus. 8. The ſhort, pendulous-flowered Cytiſus. 9. The purple-ſpiked Cytiſus. 10. The ſilvery, African Cytiſus. 11. The prickly Cytiſus, called trifoliate acacia. 12. The dwarf, narrow-leaved, ſilvery

silvery Cytisus. 13. The dwarf, viscous Cytisus. 14. The flax-leaved Cytisus. 15. The clustered-podded Cytisus. 16. The tall, anagyris-leaved, cluster-flowered Cytisus. 17. The silvery-leaved, white-flowered Cytisus. 18. The narrow-leaved, hairy, African Cytisus. 19. The yellow, prickly, American Cytisus. 20. The silky-shrub American Cytisus.

GLYCINE.

THE calyx is bilabiated; the carina of the flower bends back the vexillum at it's top: the pod contains two cells.

This genus comprehends the Apios of Boerhaave.

Glycine foliis pinnatis conjugatis, foliolis ovato-oblongis obtusis. **Scarlet Pea.**
The conjugate, pinnated-leaved Glycine, with obtuse foliola.

The root is fibrous: the stalks are weak and procumbent, unless supported; they grow to two feet, or more, in length: the leaves consist of eight or nine, or more, pairs of oblong, obtuse pinnæ, set on a middle rib, with no odd leaf at the end: the flowers are large, and stand several on the same pedicle: the fruit is a short pod, in which are several hard, scarlet seeds, spotted with black.

It is a native of Egypt, and the East Indies. Veslingius calls it, Abrus; Van Rheede, Konni; C. Bauhine, Pisum minus coccineum.

The other species are, 1. The tuberous-rooted, ash-leaved Glycine. 2. The larger-flowered Glycine.

ARACHIS.

THE calyx is divided into two parts; the pod is cylindric, coriaceous, knotty, and contains two seeds.

This genus comprehends the Arachidna and the Arachidnoides of authors.

Arachis quadrifolia.
The four-leaved Arachis.

The root is oblong, thick, and fibrated: the plant rises to a foot and a half high; the stalks are square, striated, hairy, and ramose; the leaves stand four together, in two pairs; they are an inch long, and three quarters of an inch broad, and somewhat hoary underneath: the flowers are moderately large and yellow; they stand on short pedicles, arising from the alæ of the leaves.

It is a native of Peru and the Brasils; it's pods are usually buried in the ground.

GLYCYRRHIZA.

THE calyx is bilabiate; the pod is of an oval figure, and compressed.

1. *Glycyrrhiza leguminibus echinatis.* **Rough-headed Liquorice.**
The echinated-podded Glycyrrhiza.

The root is long, and often an inch and a half in diameter: the plant grows to six feet high; the leaves are pinnated and long; the pinnules are short and obtuse, and viscous to the touch: the flowers are small and blue; they stand in clusters on short pedicles, arising from the alæ of the leaves; the pods are short and echinated, and stand in clusters, so as to form a compact head.

It is a native of Tartary. C. Bauhine calls it, Glycyrrhiza capite echinato.

This was the true Glycyrrhiza or Liquorice of the Greeks.

2. *Glycyrrhiza*

2. *Glycyrrhiza leguminibus glabris.* Common Liquorice.
The ſmooth-podded Liquorice.

The root is a yard long, and as thick as a man's thumb: the plant grows to four feet high: the ſtalk is round, firm, hairy, and viſcous; the leaves are pinnated, and the foliola obtuſe: the flowers are ſmall and purpliſh, or bluiſh; they ſtand in cluſters: the pods are ſhort and ſmooth.

It is a native of Germany. C. Bauhine calls it, Glycyrrhiza ſiliquoſa ſive Germanica. It's root is a famous pectoral, uſed in the ſhops, in decoctions, in the inſpiſſated juice, &c.

ÆSCHYNOMENE.

THE calyx is bilabiate: the pod is articulated, ſtrait, and compreſſed.

Æſchynomene caule ſcabro, folio infimo quadripinni.
The rough-ſtalked Æſchynomene, with the lower leaf quadripinnate.

The root is oblong, divaricated, and fibrated, woody, and of a yellowiſh colour: the ſtalk is robuſt, round, hairy, and four feet high: the leaves are compoſed of ſhort, obtuſe pinnules: the flowers are ſmall; the pods rough and articulated.

It is a native of Ceylon. Tournefort calls it, Hedyſarum annuum majus mimoſæ foliis. Breynius, Mimoſa non ſpinoſa major Zeylonica.

The other ſpecies are, 1. The ſmaller, ſhort-leaved Æſchynomene. 2. The larger-flowered Æſchynomene.

CORONILLA.

THE calyx is bilabiate; the upper denticulations grow together: the vexillum of the corolla is ſcarce longer than the alæ.

This genus comprehends the Coronilla, Emerus, and Securidaca of authors.

1. *Coronilla fruticoſa leguminibus teretibus, pedunculis multifloris.*
The many-flowered, ſhrubby Coronilla, with cylindric pods.

The root is long, hard, and woody; the plant is ſhrubby, but very low; the twigs are green and tough: the leaves ſtand four or five pairs on a rib; they are of a bluiſh green, and ſhort: the flowers are moderately large and yellow, and ſtand in cluſters at the tops of the branches.

Cluſius calls it, Polygala Valentina; C. Bauhine, Polygala altera.

It is a native of Italy.

2. *Coronilla herbacea leguminibus falcato-gladiatis.* Yellow Hatchet Vetch.
The herbaceous Coronilla, with falcato-gladiated pods.

The root is long and tough; the ſtalks are numerous, procumbent, and grow to two feet long: the leaves are pinnated: the pinnæ are ſix or eight pairs on each; they are broad, ſmooth, and ſhort: the flowers ſtand in cluſters like umbels; they are ſmall and yellow.

It is a native of Spain. C. Bauhine calls it, Securidaca lutea major.

The other ſpecies are, 1. The fungous-ſtalked Coronilla. 2. The bluiſh-leaved, maritime Coronilla. 3. The thick-podded Coronilla. 4. The Cretic, ſilvery Coronilla 5. The leaſt Coronilla, with cluſtered pods.

Of thoſe called Emerus are, 1. The great Emerus. 2. The leſſer ſcorpioide Emerus. 3. The crooked-podded Emerus.

Class the Seventeenth. Order the Third.

Division the Fourth.

Diadelphia Decandria, with the stigma simple; the filaments not connected at the base, the cup not bilabiate, and the stigma itself not hoary.

CICER.

THE calyx is divided into five parts, and is of the length of the corolla: the pod is of a rhombic shape.

This genus comprehends the Cicer and Lens of Tournefort, and some of the Craccæ of Rivinus.

1. *Cicer foliis serratis.* Chiches, or Chich Pease.
The serrated-leaved Cicer.

The root is oblong, white, and fibrated; the stalks are erect, firm, hairy, and ramose: the leaves are pinnated; the pinnæ numerous, broad, and serrated: the flowers stand on pedicles arising from the alæ of the leaves; they are small and purplish, or white: the pod is short and inflated; the seeds are two or three in each, and are of the size of peas.

It is a native of Spain. C. Bauhine and others call it, Cicer sativum. The seeds were once kept in the shops, to be used in cataplasms, &c. but they are now disregarded.

2. *Cicer pedunculis bifloris, foliolis integerrimis, stipulis indivisis.* The Lentil.
The two-flowered Cicer, with undivided leaves and stipulæ.

The root is white, oblong, fibrated, and tough; the stalks are ten inches high, ramose and procumbent: the leaves are pinnated; the pinnæ oblong, hairy, narrow, and pointed: the flowers are small and white; they grow two together on stalks, arising from the alæ of the leaves: the pods are short, broad, compressed, and smooth; the seeds are flatted.

It is a native of the South of France. C. Bauhine calls it, Lens major; others, Lens vulgaris.

The other species of Cicer are, 1. The Cicer, with pendulous pods, called by some Ervum and Orobus. 2. The larger and darker-seeded Cicer. 3. The great, perennial Cicer.

ERVUM.

THE calyx is divided into five parts, and is of the length of the corolla: the germen is transversely plicated.

Orobus leguminibus articulatis, semine majore.
The articulated-podded, large-seeded Orobus.

The root is oblong, tough, and fibrated; the stalks are numerous, angular, weak, and about a foot and half high: the leaves are pinnated; the pinnæ are small, obtuse, and ten or twelve pairs stand on each rib, with no odd leaf at the extremity: the flowers are small, of a bluish white, and stand one or two together on pedicles, arising from the alæ of the leaves: the pods are an inch long, slender and jointed.

It is a native of Italy. J. Bauhine calls it, Orobus sive Ervum multis.

The other species are, 1. The pale, purple-flowered Ervum. 2. The small-seeded Ervum. 3. The triangular-seeded Ervum.

ASTRAGALUS.

THE legumen, or pod, is gibbous, and contains two cells.

This genus contains the Aſtragalus of Tournefort and others, and the Glaux of Rivinus.

Aſtragalus cauleſcens procumbens, leguminibus ſcrotiformibus inflatis piloſis.
The cauleſcent, procumbent Aſtragalus, with hairy, inflated pods, reſembling a ſcrotum.

The root is oblong and woody: the ſtalks are numerous: the leaves are pinnated; the pinnæ are ſhort, broad, and hairy: the flowers ſtand in little cluſters, on pedicles, riſing from the alæ of the leaves; they are of a pale yellow colour: the pods are ſhort, inflated, blackiſh, and contain each two ſeries of ſeeds, in two cells.

It is a native of Switzerland. Camerarius calls it, Cicer ſylveſtre; others, Aſtragalus perennis veſiculoſus.

The other ſpecies are, 1. The tuberous, climbing, aſh-leaved Aſtragalus. 2. The ſpicated, purple Aſtragalus. 3. The pale blue, vetch-flowered Aſtragalus. 4. The pale-flowered Aſtragalus, called ſpiked Onobrychis. 5. The yellow, procumbent Aſtragalus, called wild Liquorice, and wild Fœnugreek. 6. The crooked-podded, yellow Aſtragalus. 7. The broad-leaved, procumbent Aſtragalus. 8. The procumbent, ſea Aſtragalus. 9. The narrow-leaved, blue Aſtragalus. 10. The narrow-leaved Aſtragalus, with flowers on long pedicles. 11. The ſweet, yellow, African Aſtragalus. 12. The greeniſh, yellow-flowered Aſtragalus. 13. The tall, white Aſtragalus. 14. The hoary Aſtragalus, with crooked pods. 15. The purple, mountain Aſtragalus, or Glaux. 16. The procumbent, vetch-leaved Aſtragalus. 17. The tragacanth-leaved Aſtragalus. 18. The glomerated-flowered, tragacanth-leaved Aſtragalus. 19. The yellow-flowered, vetch-leaved, Alpine Aſtragalus. 20. The barba Jovis-leaved, ſimple-ſtalked, yellow Aſtragalus. 21. The Siberian Aſtragalus, with crooked, pointed pods. 22. The very ſhort-ſtalked, Ruſſian Aſtragalus.

BISERRULA.

THE legumen, or pod, is plane, and has two cells, ſeparated by a tranſverſe diſſipimentum.

This genus comprehends the Pelecinus of Tournefort, and the Utrinque ſerrata of Rivinus.

Biſerrula leguminibus recurvis utrinque dentatis.
The Biſerrula, with crooked pods, dentated on each ſide.

The root is oblong and ſlender: the ſtalks are numerous, ſlender, and ramoſe: the leaves are pinnated; the pinnæ very numerous, ſmall, and cordated: the flowers are ſmall and reddiſh, and ſtand in cluſters, on long pedicles: the pods are an inch long, crooked, and ſerrated.

It is a native of Italy. C. Bauhine calls it, Securidaca ſiliquis planis utrinque dentatis; Tournefort, Pelecinus vulgaris.

TRAGACANTHA.

THE legumen, or pod, is of a roundiſh figure, and contains two cells.

Tragacantha ſpinis longioribus.
The long-ſpined Tragacantha.

The Gum Tragacanth-ſhrub.

The root is white, woody, tough, and ſpreading: the ſhrub grows to four feet high: the ſtem is robuſt and firm; the branches numerous; the ſpines very frequent, long, white,

white, and ſharp: the leaves are ſhort, pinnated, and of a whitiſh colour; the pinnæ are ſmall: the flowers are white, and moderately large.

It is a native of many parts of France. C. Bauhine calls it, Tragacantha vulgaris.

The Gum Tragacanth of the ſhops is obtained by wounding the ſtem of this ſhrub.

The other ſpecies are, 1. The purple-flowered, ever-green, Alpine Tragacanth. 2. The woolly Tragacanth, called Poterium. 3. The larger-leaved Tragacanth.

PHACA.

THE legumen, or pod, is but imperfectly divided into two cells within.

This genus comprehends the Aſtragaloides of Tournefort.

Phaca incana leguminibus brevibus.

The ſhort-podded, hoary-leaved Phaca.

The root is remarkably thick, black on the outſide, and fibrated: the ſtalks are numerous, angular, as thick as a man's figure, and hoary: the leaves are pinnated; the pinnæ ſhort and hoary: the flowers ſtand in a kind of ſpikes, on pedicles, riſing from the alæ of the leaves; they are large and white.

It is a native of Italy. C. Bauhine calls it, Aſtragalus lanuginoſus radice ampliſſima.

The other ſpecies are, 1. The yellow-flowered Siberian Phaca. 2. The narrow-leaved Phaca.

HEDYSARUM.

THE carina of the corolla is tranſverſely obtuſe: the articulations of the legumen, or pod, contain each a ſingle ſeed.

This genus comprehends the Hedyſarum, Onobrychis, and Alcagi of Tournefort.

Hedyſarum foliis pinnatis, leguminibus articulatis, aculeatis, nudis, caule diffuſo. French Honeyſuckle.

The diffuſe-ſtalked, pinnated-leaved Hedyſarum, with naked, aculeated, and articulated pods.

The root is long, thick, and divaricated: the ſtalks are procumbent, four or five feet long, hollow, ſmooth, and thick: the leaves are pinnated; the pinnæ large, broad, obtuſe, and hairy at their edges: the flowers are large and beautiful; they ſtand on long pedicles, in cluſters, and are of a fine red colour.

It is a native of Italy. C. Bauhine calls it, Onobrychis ſemine clypeato aſpero major; others, Hedyſarum clypeatum.

The other ſpecies are, 1. The undulated, crooked-podded Hedyſarum. 2. The purple Hedyſarum, with prickly pods. 3. The roundiſh-podded Hedyſarum. 4. The ſmooth-podded, blue, Siberian Hedyſarum. 5. The ternate-leaved, American Hedyſarum. 6. The ternate-leaved, ſhrubby, procumbent Hedyſarum. 7. The capers-leaved, dwarf Hedyſarum. 8. The little, purple Hedyſarum. 9. The ſingle, acuminated-leaved Hedyſarum. 10. The ſingle, roundiſh-leaved Hedyſarum. 11. The two-leaved, yellow-flowered Hedyſarum. 12. The trifoliate Hedyſarum, with diſtorted pods. 13. The procumbent, hairy Hedyſarum. 14. The large-flowered Hedyſarum.

Of thoſe called Onobrychis by authors, beſide the beforementioned, there are, 1. The pale-flowered, common Onobrychis. 2. The vetch-leaved, ſcarlet Onobrychis. 3. The narrow-leaved Onobrychis. 4. The great-fruited Onobrychis.

ORNITHOPUS.

THE legumen is articulated, cylindric, and ſpirally crooked.

This genus comprehends the Ornithopodium of Tournefort, and the Scorpiurus of Rivinus.

Ornithopus

Ornithopus foliis pinnatis, leguminibus ſubarcuatis. Bird's-foot.
The pinnated-leaved Ornithopus, with arcuated pods.

The root is oblong and white: the ſtalks are numerous, procumbent, ſlender, hairy, and ſix inches long: the leaves are pinnated, and an inch, or more, in length; the pinnæ are numerous, and very ſmall: the flowers are very minute, but of a beautiful mixture of white and red; they ſtand three or four together: the pods are near half an inch long, crooked, and much reſemble the toes of a bird's foot.

It is common in dry paſtures. C. Bauhine calls it, Ornithopodium minus.

The other ſpecies are, 1. The larger, yellow-flowered Ornithopus. 2. The tuberous-rooted Ornithopus. 3. The ſcorpioide Ornithopus, with compreſſed pods. 4. The ſcorpioide Ornithopus, with cylindric pods. 5. The undulated-podded Ornithopus. 6. The purſlane-leaved Ornithopus.

SCORPIURUS.

THE legumen is intercepted with iſthmi, and is cylindric, bent back, and revolute.

This genus comprehends the Scorpioides of Tournefort, and the Campoides of Rivinus.

There is but one known ſpecies of it.

SCORPIURUS. Rough Caterpillars.

The root is oblong, yellow, and tough: the ſtalks are numerous, procumbent, round, hairy, and a foot long: the leaves are oblong and broad, obtuſe at the ends, of a bluiſh-green colour, and a little hairy; they ſtand on long pedicles, and have each two auriculæ at the baſe: the flowers are yellow; they ſtand ſingly on long pedicles, riſing from the alæ of the leaves: the pod is contorted, and reſembles a caterpillar.

It is a native of France. C. Bauhine calls it, Scorpioides beupleuri folio.

The pod varies in the degree of contortion, and other accidents, and hence have been made ſeveral new ſpecies.

HIPPOCREPIS.

THE pod is crooked and compreſſed, and is emarginated in ſeveral places, along one of the ſutures.

Hippocrepis leguminibus confertis margine exteriore lobatis. Common horſe-ſhoe Vetch.
The cluſter-podded Hippocrepis, with the exterior edge of the pod lobated.

The root is very long, ſlender, and blackiſh: the ſtalks are numerous, procumbent, and ramoſe, eight inches long, ſlender, and often reddiſh: the leaves are pinnated; the pinnæ are ſmall and irregular: the flowers ſtand in little cluſters, on long, naked pedicles; they are of a deep yellow colour, and pendulous: the pods are arcuated, and, in ſome degree, reſemble the figure of a horſe-ſhoe.

It is a native of England, but not common. C. Bauhine calls it, Ferrum equinum ſiliquis in ſummitate.

The other ſpecies are, 1. The ſingle-podded Hippocrepis. 2. The many-podded, taller Hippocrepis.

MEDICAGO.

THE pod is compreſſed, and of a cochleated figure: the carina of the corolla bends from the vexillum.

This genus comprehends the Medicago, Medica, Falcata, and Cochleata of authors.

Medicago

Medicago pedunculis racemosis, leguminibus contortis, caule recto glabro. **Lucerne, or Medic Fodder.**

The racemose, contorted-podded Medicago, with an erect, smooth stalk.

The root is very long, thick, and perennial: the stalks are numerous, round, erect, and two feet high: the leaves stand three on a pedicle, as in the trefoils; they are oblong, obtuse, and crenated: the flowers are numerous, of a purplish colour, and arranged in form of a spike: the pods are crooked.

It is a native of Spain. Clusius calls it, Medica legitima; Lobel, Fœnum Burgundicum.

The other species are, 1. The cochleated Medicago, with black, hispid pods. 2. The kidney-shaped, podded Medicago. 3. The striated and falcated-podded Medicago. 4. The shrubby, hoary Medicago, called by some the crooked-podded Cytisus. 5. The yellow, erect Medicago. 6. The small, yellow-flowered Medicago. 7. The sea, yellow-flowered Medicago. 8. The spotted and cordated-leaved Medicago. 9. The great, turbinated-fruited Medicago. 10. The hairy Medicago, with rigid pods. 11. The dwarf, echinated Medicago. 12. The obtuse-leaved, coronated Medicago. 13. The obtuse-leaved, many-podded Medicago. 14. The cut-leaved Medicago. 15. The ciliated-podded Medicago. 16. The perennial, round-podded Medicago. 17. The great-podded Medicago, with reflex spines. 18. The oval-fruited Medicago, with rigid spines. 19. The great, prickly, sea Medicago. 20. The thick, hoary, cordated-leaved Medicago. 21. The great-fruited Medicago, with spines bent downwards. 22. The trefoil-like Medicago, with falcated pods. 23. The Spanish, vulneraria-like Medicago. 24. The Cretic, falcated-podded Medicago. 25. The great, smooth-fruited Medicago.

TRIGONELLA.

THE vexillum and alæ of the corolla are nearly equal, and patent: the flower seems tripetalous.

This genus comprehends the Fœnumgræcum of Tournefort and others.

Trigonella leguminibus sessilibus striatis subfalcatis acuminatis. **Fœnugreek.**

The Trigonella, with striated, acuminated, and somewhat falcated pods.

The root is oblong, white, slender, tough, and woody: the plant rises to about eight inches high: the leaves are like those of the common trefoil, three on a pedicle: the flowers stand in the alæ of the leaves, and are large and white, with a cast of bluish: the pods are four inches long, and falcated.

It is a native of France, but is sown in fields in many parts of Europe. C. Bauhine calls it, Fœnumgræcum sativum.

It's seed is the Fœnugreek of the shops, an emollient used in cataplasms, and other external applications, and an ingredient in some compositions.

The other species are, 1. The shorter-podded, wild Trigonella. 2. The little, Arabian Trigonella. 3. The many-podded Trigonella. 4. The great Trigonella, with numerous, long pods. 5. The ornithopodium-podded Trigonella. 6. The procumbent, Siberian Trigonella, with compressed, membranaceous pods.

TRIFOLIUM.

THE flowers are collected together in a kind of heads: the pods are hardly longer than the cups.

This genus comprehends the Trifolium, Melilotus, and Lagopus of authors.

Trifolium

Trifolium erectum floribus racemosis, leguminibus nudis dispermis.

The erect Trefoil, with clustered flowers, and naked, two-seeded pods. **Melilot.**

The root is oblong, white, slender, and fibrated: the stalks are round, green, erect, hollow, and two feet high: the leaves are oblong, serrated, and stand three on the same pedicle: the flowers are yellow, and small, and stand in long spikes, on pedicles rising from the alæ of the leaves.

It is common in our pastures. C. Bauhine calls it, Melilotus officinarum Germaniæ.

It has been much used as an emollient.

The other species of Trifolium are extreamly numerous. Of those called Melilot there are, 1. The great, white Melilot. 2. The narrow-leaved, creeping Melilot. 3. The round-podded, erect Melilot. 4. The spotted-leaved Melilot. 5. The many-seeded, procumbent Melilot. 6. The narrow-leaved Melilot. 7. The crooked-podded Melilot. 8. The great, sweet, crooked-podded Melilot. 9. The long, rough-podded, procumbent Melilot. 10. The reflex-podded, Egyptian Melilot. 11. The whole-leaved, oriental Melilot. 12. The little, erect, thick-podded Melilot. 13. The coronated, Syrian Melilot. 14. The bladdery, American Melilot.

Of those called simply Trefoils there are, 1. The sweet-scented Trefoil. 2. The common, red Trefoil. 3. The longer-leaved, red Trefoil. 4. The shorter-leaved, small-headed, red Trefoil. 5. The common, white Trefoil. 6. The purple, folliculated Trefoil. 7. The greater, hop Trefoil. 8. The lesser, hop Trefoil. 9. The smallest, hop Trefoil. 10. The crenated-leaved, red Trefoil. 11. The obtuse-leaved, crenated, red Trefoil. 12. The round-spiked, pale-red Trefoil. 13. The stellate and folliculate-headed Trefoil. 14. The purple, stellate Trefoil. 15. The dipsacus-headed Trefoil. 16. The erect, globose-headed Trefoil. 17. The procumbent, globose-headed Trefoil. 18. The soft-headed Trefoil. 19. The rounder, soft-headed Trefoil. 20. The round and rough-headed Trefoil. 21. The thyme-headed Trefoil. 22. The strawberry Trefoil. 23. The subterranean Trefoil. 24. The hairy, small-flowered, red Trefoil. 25. The quadrifoliate, garden Trefoil, improperly so called.

Of those called Lagopus there are, 1. The great, rounder-headed Lagopus. 2. The great, long-headed Lagopus. 3. The very long, red-headed Lagopus. 4. The very long and slender-headed Lagopus. 5. The narrow-leaved Lagopus. 6. The narrow-leaved, pale, red-headed Lagopus. 7. The common, little, field Lagopus. 8. The yellowish-flowered Lagopus.

LOTUS.

THE pod is cylindric and slender: the alæ of the flower are longitudinally connivent upwards: the calyx is tubulous.

Lotus leguminibus solitariis membranaceo-quadrangularibus.

The single-podded Lotus, with membranaceo-quadrangular pods. **Square-podded Vetch.**

The root is slender, oblong, and white: the stalks are numerous, round, hairy, oblique, ramose, and a foot long: the leaves are placed three at a joint, the two lower ones surrounding the stalk: the flowers are single, on pedicles of an inch and a half long, with a leaf at the base of the cup; they are moderately large, and of a beautiful crimson colour: the pods are an inch and a half long.

It is a native of Sicily. C. Bauhine calls it, Lotus ruber siliqua angulata.

The other species are, 1. The little, smooth, five-leaved Lotus. 2. The narrower-leaved, little, smooth Lotus. 3. The hairy Lotus, with slender pods. 4. The larger-flowered, yellow Lotus. 5. The hoary, whitish-leaved Lotus. 6. The smooth-leaved, shrubby Lotus. 7. The spotted-leaved Lotus. 8. The hairy, very white Lotus. 9. The silvery, Cretic Lotus. 10. The long-podded, yellow, Cretic Lotus. 11. The

tall, hairy, glomerated-flowered Lotus. 12. The ſmooth, fattiſh-leaved, ſea Lotus. 13. The corniculated-podded Lotus. 14. The bird's-foot-podded Lotus. 15. The larger, crooked-podded Lotus. 16. The jointed-podded Lotus. 17. The great, yellow, Portugal Lotus.

DORYCNIUM.

THE pod is of a roundiſh figure: the vexillum of the flower is obverſely cordated, and reflex.

Dorycnium fruticoſum foliis anguſtis.
The ſhrubby, narrow-leaved Dorycnium.

The root is oblong, thick, hard, woody, and black: the ſhrub riſes to three feet high, and is all over of a white, hoary colour: the leaves ſtand three, four, or five together, without pedicles, ſurrounding the ſtalk in a radiated manner: the flowers are white, and much reſemble thoſe of the common white trefoil; they ſtand in a kind of heads, at the tops of the branches.

It is a native of France. C. Bauhine calls it, Trifolium album anguſtifolium floribus congeſtis.

There are but two other known ſpecies, 1. The taller, broader-leaved Dorycnium, 2. The larger-flowered Dorycnium.

PSORALEA.

THE calyx is full of little, ſcabrous protuberances, and is of the length of the pod: the pod contains only one ſeed.

Pſoralea foliis pinnatis. The Itch-tree.
The pinnated-leaved Pſoralea.

The root is ſpreading: the ſhrub grows to eight feet high: the leaves are pinnated; the pinnæ ſmall, narrow, and linear: the flowers are moderately large, and of a beautiful blue colour: the pods ſhort.

It is a native of Ethiopia. Rivinus calls it, Spartium Africanum; others have made it a dorycnium.

The other ſpecies are, 1. The Pſoralea, called the bituminous Trefoil. 2. The digitated, quinate-leaved Pſoralea. 3. The ſingle, oval-leaved Pſoralea.

CLITORIA.

THE vexillum of the flower is very large, patent, and plicatile.

This genus comprehends the Ternatea of Tournefort, and Clitorius of Dillenius.

Clitoria foliis pinnatis. The Clitoris Flower.
The pinnated-leaved Clitoria.

The root is oblong and ſlender: the ſtalk is round, green, and moderately thick: the leaves are pinnated; the pinnæ ſhort, broad, and obtuſe: the flowers are very large, and of a beautiful blue colour.

It is a native of the iſland of Ternata. Commelin calls it, Phaſeolus Indicus glycyrrhizæ foliis, flore amplo cæruleo.

There is but one other known ſpecies of it, which is the trifoliate Clitoria.

INDIGOFERA.

THE calyx is plane: the alæ of the flower are connivent at their upper edges, and are of the ſame figure with the vexillum.

Class 16 & 17 Monadelphia & Diadelphia

Plate 13. P. 55.

16

17

Geranium 23

Hermannia

Fumaria

Galega

Coronilla 3

Hippocrepis

Sida

Polygala

Lupinus

Phaseolus

Lotus

Ornithopus

Gossypium

Cytisus

Lathyrus

Astragalus

Scorpiurus

Alcea

Erythrina

Spartium

Robinia

Orobas

Dorycnium

Biserrula

Medicago

B. Cole Sculp.

Indigofera leguminibus arcuatis incanis, racemis folio brevioribus.

The Indigofera, with arcuated, hoary pods, and with the cluſters ſhorter than the leaves.

The Indigo Plant.

The root is oblong and divaricated: the ſtalks are numerous, woody, and three feet high; they are round, of the thickneſs of one's little finger, and of a greyiſh colour: the leaves are pinnated; the pinnæ are numerous and ſmall: the flowers are ſmall, and ſtand in cluſters at the tops of the ſtalks; they are often reddiſh, and often merely white.

It is a native of both the Eaſt and Weſt Indies. Moriſon calls it, Anil, ſive Indigo Indica.

The preparation, called Indigo blue, is made from the juice of this herb.

DALEA.

THE corolla conſiſts of five petals, four of which are equal and ſtrait; the fifth, or upper one, is very ſmall: the pod contains a ſingle ſeed.

Theſe characters ſufficiently diſtinguiſh it from all other genera of this claſs, without a farther deſcription.

Claſs the Eighteenth.

POLYADELPHIA.

Plants which have the ſtamina connected together at their baſes into ſeveral ſeries.

OF theſe, as there can be no claſſical character eſtabliſhed, the generical ones muſt be given at large.

Of the Polyadelphia ſome have only five ſtamina, ſome have twenty, and others a much larger and indeterminate number: they may, therefore, be conveniently arranged, according to theſe differences, into three orders.

Claſs the Eighteenth. Order the Firſt.

POLYADELPHIA PENTANDRIA.

Plants which have only five ſtamina, ſeparately connected at their baſes.

THEOBROMA.

THE calyx is a perianthium, compoſed of three reflexo-patent leaves; theſe are of an oval figure, hollow, and deciduous: the corolla conſiſts of five erecto-patent, concavo-galeated petals, each of them armed with a bifid ſeta: the nectarium is of a campanulated figure, and erecto-patent; it is ſmaller than the petals, and conſiſts of five ovato-lanceolate, connected leaves: the ſtamina are ſubulated filaments, of the length of the nectarium, on which they grow, in manner of rays; each of theſe is divided into five parts at the top, and on each there are five antheræ, covered with the hollowed petal: the germen is of an oval figure; the ſtyle is ſubulated, and of the length of the nectarium: the ſtigma is ſimple: the fruit is a woody cortex, of an unequal ſurface, with five ridges, and has ſeeds lodged in five ſeries, within it; theſe are numerous, fleſhy, and nearly of an oval figure.

This genus comprehends the Cacao of Tournefort, and the Guazuma of Plumier.

The Cacao has an oblong, quinquangular pod, lengthened at each extremity.

The Guazuma has a globoſe fruit, covered with tubercles, and it's rind is perforated in manner of a ſieve; within it there are five cells.

Theobroma

Theobroma fructu oblongo.
The oblong-fruited Theobroma.

The Chocolate Nut-tree.

The root is brachiated and large; the tree is not very tall, but it is of a very elegant form, and, when loaded with it's fruit, is of great beauty: the trunk is as thick as a man's leg, and about five feet high: the branches are numerous; the leaves are ten inches long, and four and a half broad, thin, and of a bright green: the flowers grow on ſeparate hairy pedicles, an inch or two in length from the trunk and branches of the trees; they are ſmall and yellowiſh: the fruit is oblong, hard, ſix inches in length, and contains in it the ſeeds which make our chocolate.

It is a native of America, C. Bauhine calls it, Amygdalis ſimilis Guatimalenſis. There is but one other known ſpecies of Theobroma, that is, the round-fruited Theobroma.

Claſs the Eighteenth. Order the Second.

POLYADELPHIA ICOSANDRIA.

Plants that have twenty ſtamina connected into ſeveral ſeries at their baſes.

CITRUS.

THE calyx is a very ſmall, deciduous perianthium, formed of one leaf, plane at the baſe, and divided into five denticulations at the top: the corolla conſiſts of five, oblong, plane, patent petals: the ſtamina are about twenty ſubulated, compreſſed filaments, erect, and placed in a circular manner, and coaleſcing into ſeveral bodies, compoſed of various numbers of them at the baſe: the antheræ are oblong; the germen is roundiſh: the ſtyle is cylindric, and of the length of the ſtamina: the ſtigma is globoſe, and has nine partitions within it: the fruit is a berry, covered with a thick, fleſhy rind, the pulp being formed into veſicles, and having nine cells: the ſeeds are two in each; they are of a ſuboval figure, and callous ſubſtance.

This genus comprehends the Aurantium, Citrum, and Limon of Tournefort and others. In the Aurantium, the petioles are cordated. In the Citrum, the petioles are naked and ſimple. The Limon, Tournefort ſays, is eaſily diſtinguiſhed from both, by it's figure. But theſe are ſpecific, not generical, diſtinctions.

Citrus petiolis linearibus.
The Citrus, with linear petioles.

The Citron-tree.

The root is brachiated and ſpreading: the tree grows to fifteen feet, or more, in height: the bark is brown; the young ſhoots are tough, and very flexible: the leaves are large, oblong, broadeſt in the middle, and of a beautiful bright green: the flowers are large, white, and extreamly fragrant: the fruit is larger than the lemon, but much reſembles it in ſhape and colour; it's ſurface is uſually uneven, often full of large protuberances.

It is a native of Perſia. C. Bauhine calls it, Malus Medica; others, Citreum vulgare.

The other ſpecies of Citrus are, 1. The Aurantium Vulgare, or Aurantia Mala; and, 2. The Limon Vulgaris, or the common Orange and Lemon. Of both theſe there are many varieties in the ſhape and ſize of the fruit, which authors have made diſtinct ſpecies.

Claſs

Class the Eighteenth. Order the Third.

POLYADELPHIA POLYANDRIA.

Plants which have very numerous stamina connected together, into several series at their bases.

HYPERICUM.

THE calyx is a permanent perianthium, lightly divided into five oval, hollow segments: the corolla consists of five oblong, oval, obtuse, patent petals: the stamina are numerous filaments, nearly of the length of the corolla; they are slender, and are connected at their bases into five distinct series: the antheræ are small; the germen is roundish; the styles are usually three, sometimes but two, sometimes five; they are distant, and of the length of the stamina: the stigmata are simple: the fruit is a roundish capsule, having as many cells as there are styles in the flower; the seeds are numerous and oblong.

This genus comprehends the Androsæmum and Ascyrum of Tournefort. The Ascyrum has five styles, and the seeds simple: the Hypericum has three styles, and the pericarpium membranaceous: and the Androsæmum has three styles, and the pericarpium soft and coloured.

Hypericum corollis pentagynis, caule tetragono-herbaceo simplici, foliis lævibus integerrimis.

The square, herbaceous-stalked Hypericum, with five styles, and with smooth, undivided leaves.

The root is fibrous and spreading; the stalks are numerous, oblique, a foot long, square, tough, and firm, and usually browniſh: the leaves are an inch and half long, near an inch broad, firm, even at the edges, and of a pale green; they stand in pairs: the flowers are an inch and a half in diameter, of a beautiful yellow colour, and have a vast number of stamina in the middle: the fruit is a large, dry capsule, containing five cells.

It is a native of the East Indies, but is common in our gardens. Morison calls it, Androsæmum flore et theca quinquecapsulari omnium maximis.

The other species are, 1. The great, berry-bearing Androsæmum, or Tutsan. 2. The common St John's-wort. 3. The nummularia-leaved Hypericum. 4. The Syrian, short-leaved Hypericum. 5. The Hypericum, with a curled, triangular leaf. 6. The little, erect Hypericum, called Tragus's pretty Hypericum. 7. The little, procumbent Hypericum. 8. The larger, woolly, procumbent Hypericum. 9. The lesser, woolly, procumbent Hypericum. 10. The marsh, woolly, procumbent Hypericum, called Marsh St Peter's-wort. 11. The hairy, erect, round-stalked Hypericum. 12. The oriental Hypericum, with leaves hairy at their edges. 13. The simple-stalked, elegant, broad-leaved Hypericum. 14. The large, perfoliate-leaved Hypericum. 15. The square-stalked Hypericum, called common St Peter's-wort. 16. The fine, glaucous-leaved, stone Hypericum. 17. The stinking, shrubby Hypericum. 18. The large-flowered, perfoliate Hypericum. 19. The low, Alpine Hypericum, with large flowers. 20. The myrtle-leaved Hypericum. 21. The toad-flax-leaved Hypericum. 22. The least, woolly Hypericum. 23. The small-leaved Hypericum, with very large flowers, or Hypericum of mount Olympus. 24. The erect, willow-leaved Hypericum.

ASCYRUM.

THE calyx is a permanent perianthium, composed of four leaves; the two exterior very small, placed opposite and linear; the two interior large, plane, erect, and cordated: the corolla consists of four oval petals; the two exterior ones opposite and very large; the interior smaller: the stamina are numerous, capillary fila-

ments, connected at their baſes into four ſeparate bodies: the antheræ are roundiſh; the germen is oblong; there is ſcarce any ſtyle; the ſtigma is ſimple: the fruit is an oblong, pointed capſule, formed of two valves, and included in the larger leaves of the calyx; the ſeeds are numerous, ſmall, and round.

It is an American deſcribed by Plumier. The characters ſufficiently diſtinguiſh it, without any farther deſcription.

Claſs the Nineteenth.

SYNGENESIA.

Plants, whoſe antheræ coaleſce into a cylinder.

This claſs comprehends the Herbæ flore compoſito of Tournefort, Ray, and others.

The claſſical characters of the flowers of theſe plants, called Compoſite Flowers, are as follow.

The character of the ſingle Floſcule is this:

THE calyx is a kind of corona of the ſeed, placed on the ſummit of the germen: the corolla is formed of a ſingle petal: the tube is very narrow, very long, and ſituate on the germen, and is either tubulated or ligulated, or wholly without a limb.

In the tubulated corolla, the limb is of a campanulated figure, divided into five reflexo-patent ſegments. In the ligulated corolla, the limb is linear, plane, and turned outwards; and it's extremity is ſometimes entire, ſometimes divided into three, or into five, ſegments, or truncated. Where there is no limb at all, there is often alſo no tube.

The ſtamina are five very ſhort, capillary filaments, inſerted into the neck of the corolla: the antheræ are five, linear and erect, and they coaleſce at their ſides, ſo as to form a kind of tubulated cylinder, with five denticulations at the mouth, and of the length of the limb: the germen is oblong, and ſituated under the receptacle of the floſcule: the ſtyle is filiform, erect, and of the length of the ſtamina, and perforates the cylinder, formed by the antheræ: the ſtigma is divided into two patent, revolute ſegments: there is properly no true pericarpium, though in ſome of the genera there is a kind of cruſt, of a coriaceous ſubſtance.

The ſeed is ſingle, oblong, often of a quadrangular figure, and uſually ſmalleſt toward the baſe, and is either coronated or plane; when coronated, the corona is formed either of a downy matter, or of the cup of the corollula. The down of the ſeed is formed into ſeveral rays, diſpoſed in a circular order, and theſe are ſometimes ſimple, ſometimes radiated at the top, and ſometimes ramoſe. This down ſometimes alſo is ſeſſile, and ſometimes it ſtands on a pedicle: when the corona is formed of the perianthium, it is ſmall, permanent, and uſually divided into five ſhort ſegments or denticulations.

The parts of generation are very variouſly diſpoſed in theſe corollulæ in the ſeveral genera: Hence there are eight ſpecies of them; four of the tubulated, and four of the ligulated, corollulæ.

Of the tubulated ones there are, 1. The hermaphrodite kind, in which the ſtamina and piſtil are both preſent in the ſame corollula. 2. The male, in which there are only the ſtamina, without any ſtyle or ſtigma. 3. The female, in which there is a piſtil, but no ſtamina; and, 4. The neutral, in which there is neither piſtil, ſtyle, nor ſtamina.

The ligulated corollulæ have the ſame variations, under which they are expreſſed by the ſame terms.

The compoſite flower, conſidered in the general, is called Flos floſculoſus. This is formed of an arrangement of a great number of the former corollulæ together. It's parts are properly two, the receptacle of the fructifications, and the calyx.

The common receptacle of the fructifications receives a number of ſeſſile flowers: it's diſk is ſometimes hollow, ſometime plane, convex, pyramidal, or globoſe: it's ſurface either naked or paleaceous. When naked, it is ſometimes covered with ſlight

punctures,

punctures, and ſometimes it is covered with erect hairs; when paleaceous, the paleæ are of a ſubulated figure, or linear; compreſſed and erect, and ſerve to ſeparate the floſcules.

The calyx or common cup is a perianthium, containing both the receptacle and the floſcules, which is contracted after the time of flowering; but, when the ſeeds are ripened, is expanded again and thrown back. It is either ſimple, imbricated, or double: the ſimple calyx is that which ſurrounds the floſcules only, with one ſeries of leaves; the imbricated kind is that compoſed of a great number of ſquammæ, the exterior ones of which are gradually ſhorter, and in part cover the interior.

The double kind, called alſo Calyx auctus, is that in which there is a ſingle, long, and equal ſeries of ſegments, ſurrounding the floſcules; and a ſecond ſeries of ſegments, or another cup ſhorter, and ſurrounding the baſe of the inner taller cup: this outer calyx or ſeries of ſegments is uſually very ſmall.

The compound or compoſite flowers are of ſeveral ſpecies. They are compoſed, 1. Of tubular hermaphrodite floſcules in the diſk, and the ſame in the radius. 2. Of tubular hermaphrodite floſcules in the diſk, and of tubular, female ones in the radius. 3. Of tubular, hermaphrodite floſcules in the diſk, and tubular, neutral in the radius. 4. Of tubular hermaphrodite ones in the diſk, and ligulated hermaphrodite ones in the radius. 5. Of tubular hermaphrodite ones in the diſk, and female ligulated ones in the radius. 6. Of tubular hermaphrodite ones in the diſk, and of neutral ligulated ones in the radius. 7. Of tubular hermaphrodite ones in the diſk, and of naked female ones in the radius. 8. Of tubular male flowers in the diſk, and of naked female ones in the radius. 9. Of ligulated hermaphrodite ones in the diſk, and of the ſame in the radius.

According to theſe diſtinctions, the claſs of the Polygamia may be divided into five orders, under the names of, 1. Polygamia Æqualis. 2. Polygamia Superflua. 3. Polygamia Fruſtranea. 4. Polygamia Neceſſaria. 5. Polygamia Monogamia.

The eſſential character of the Flos floſculoſus conſiſts in the coaleſcence of the antheræ into a cylindric body, and in the ſeed being ſingle, and placed under the receptacle. The common calyx is wanting in ſome of the genera, as in the Echinopus; and the common receptacle is wanting in ſome, as in the Milleria. Therefore theſe are not the parts on which to form a claſſical character.

Claſs the Nineteenth. Order the Firſt.

SYNGENESIA POLYGAMIA ÆQUALIS.

Plants whoſe antheræ coaleſce into a cylinder, and whoſe flowers are compoſed of a number of floſcules, each of which has it's ſtamina and piſtil in itſelf.

This order contains what are called the Herbæ flore floſculoſo by others.

IN ſome of the genera, the corollæ are planipetalous; in others, they are tubipetalous. As they are numerous in the whole, they may be conveniently arranged thus into two diviſions.

Claſs the Nineteenth. Order the Firſt.

Diviſion the Firſt.

Syngeneſia Polygamia Æqualis, with the corollulæ planipetalous.

TRAGOPOGON.

THE receptacle is naked: the calyx is ſimple, and formed of many leaves; the down is plumoſe.

Tragopogon

Tragopogon calycibus corolla longioribus, foliis acuminatis, pedunculis incraſſatis. **Purple Goat's-beard, or Artifi.**
The Tragopogon, with cups longer than the flowers, and incraſſated peduncles.

The root is oblong, white, as thick as one's finger, and eſculent: the plant riſes to two feet high; the ſtalks are round, hollow, and ramoſe: the leaves are long, narrow, and ſharp-pointed, and much reſemble thoſe of the common leek: the flowers are large, and of a deep purple; they ſtand on the tops of the branches: the cups are much longer than the flowers, and of a bright green.

It is a native of Germany; we have it frequent in our gardens. Authors call it, Tragopogon purpureum, and Artifi.

The other ſpecies are, 1. The common, yellow Tragopogon. 2. The oblong, ſinuated-leaved Tragopogon. 3. The broad-leaved, blue Tragopogon. 4. The graſſy-leaved, ſcarlet Tragopogon. 5. The crocus-leaved, purple Tragopogon. 6. The yellowiſh-flowered, laciniated-leaved Tragopogon. 7. The low, hairy Tragopogon. 8. The ſuccory-leaved, hoary Tragopogon, called by authors, Hierachium magnum, and Chondrilla foliis cichorei.

PRENANTHES.

THE receptacle is naked; the calyx is calyculated: the down is ſimple, and nearly ſeſſile: the floſcules are placed in a ſimple ſeries.

The characters ſufficiently diſtinguiſh the Prenanthes, without a farther deſcription.

CHONDRILLA.

THE receptacle is naked; the calyx is calyculated; the down is ſimple and ſtipated: the floſcules are arranged in ſeveral ſeries.

Chondrilla caule ſpinoſo, ramis junceis. **Ruſhy Gum Succory.**
The prickly, ruſhy-branched Chondrilla.

The root is large, oblong, white, and full of a viſcous juice: the radical leaves are large, broad, and jagged at the edges: the ſtalks are tough, ruſhy toward the top, and prickly in the lower part: the plant riſes to four feet high; the leaves are jagged, and very few; the flowers are yellow, moderately large, and grow from the ſides of the ſtalks toward the tops.

It is common in France and Italy. C. Bauhine calls it, Chondrilla juncea viſcoſa arvenſis quæ prima Dioſcoridis.

The other ſpecies are, 1. The hawkweed-leaved Chondrilla, called Hierachium pulchrum by many. 2. The pale-flowered, ſonchus-leaved Chondrilla. 3. The purple-flowered, ſonchus-leaved Chondrilla. 4. The narrower-leaved, purple Chondrilla.

CREPIS.

THE receptacle is naked; the calyx is calyculated; the down is plumoſe and ſtipated.

Crepis foliis amplexicaulibus lanceolatis dentatis, radicalibus ſinuatis.
The creeping, amplexicaule-leaved, dentated Crepis, with the radical leaves ſinuated.

The root is oblong and white; the radical leaves are large, hairy, and ſinuated; the ſtalks are numerous, round, of a foot high, and hairy: the leaves on them are dentated, and ſtand at diſtances, and from the ala of each there riſes a branch: the

the flowers ſtand at the tops of the branches, and, before they open, they bend downwards; they are, when open, very large, and of a fine bright red.

It is a native of Italy. C. Bauhine calls it, Chondrilla purpuraſcens fœtida; others, Hierachium Apulium flore ſuaverubente.

The other ſpecies are, 1. The ſcorzonera-leaved, Alpine Crepis. 2. The Crepis, with oval, dentated leaves. 3. The ſetaceous-cupped Crepis, called by others the falcated, proliferous Hawkweed.

HYOSERIS.

THE receptacle is naked; the calyx is calyculated: the down is ſimple.

This genus comprehends the Taraxaconaſtrum of Vaillant, and the Leontodontoides of Micheli.

Hyoſeris caule diviſo nudo. Swine's
The Hyoſeris, with a divided, naked ſtalk. Succory.

The root is white, ſlender, and very long; the leaves are numerous, oblong, and rounded at the ends; they ſomewhat reſemble thoſe of the common, little daiſy; they are a little hairy, ſerrated at the edges, and of a bluiſh-green: the ſtalks are numerous, ſlender at the bottom, but thicker toward the parts where the flowers ſtand; they are naked, except for ſome little rudiments of leaves at the baſes of the ramifications: the flowers are ſmall and yellow.

It is common in ſandy places in moſt parts of Europe. C. Bauhine calls it, Hierachium minus folio ſubrotundo.

LAPSANA.

THE receptacle is naked; the calyx is calyculated, and every ſquamma uſually incloſes a ſeed.

This genus comprehends the Lampſana, Hedypnois, Zacyntha, Rhagadiolus, and Rhagadioloides of authors. In the Lampſana, the ſeeds are all naked, not ſurrounded by the ſquammæ of the cup. In the Rhagadiolus, every ſquamma of the cup incloſes a ſingle ſeed. In the Zacyntha, the marginal ſeeds are each ſurrounded by a ſquamma of the cup, and the central ones are coronated with a ſhort, ſimple down. In the Hedypnois, the marginal ſeeds are each ſurrounded in a ſquamma of the cup, and the central ones are coronated with a cup divided into five denticles.

Lapſana calycibus fructus undique radiis ſubulatis patentibus, foliis indiviſis. Stellated
The undivided-leaved Lapſana, with the cups patent and radiated. Hawkweed.

The root is oblong, ſimple, and white; the plant riſes to a foot and a half high; the ſtalks are round, ſlender-branched, and a little hairy: the leaves are two or three inches long, of a lanceolated figure, and undivided at the edges: the flowers are ſmall, yellow, and numerous: the cups of the fruit are radiated; there is a ſingle ſeed immerſed in each of the horns or rays.

It is a native of France. C. Bauhine calls it, Hierachium ſiliqua falcata; J. Bauhine, Hierachium ſtellatum; others, Rhagadiolus.

The other ſpecies are, 1. The common Lampſana, or Nipple-wort. 2. The crooked-ſeeded, drooping-headed Lampſana, called Hedypnois by Tournefort and others. 3. The wart-ſuccory, or Lampſana, called by many Cichoreum verrucoſum; and by Tournefort, Zacyntha.

LACTUCA.

THE receptacle is naked; the calyx is imbricated; the down is ſimple, and has a ſtalk.

Lactuca caule et foliis aculeatis. Prickly-ribbed,
The Lactuca, with prickly leaves and stalks. Wild Lettuce.

The root is large, oblong, and white: the radical leaves are ten inches long, and four broad, sinuated, and serrated, and the middle rib underneath is armed with short, sharp spines: the plant rises to five feet high, and is in every part full of a milky juice, of a disagreeable smell: the flowers are small, numerous, and yellow: the leaves on the stalk are like the radical ones, only smaller.

It is common on our-ditch banks. C. Bauhine calls it, Lactuca sylvestris costa spinosa.

The other species are, 1. The great, whole-leaved, opium-scented Lactuca. 2. The narrow and laciniated-leaved Lettuce. 3. The dwarf, blue-flowered, wild Lettuce. 4. The many-leaved, wild Lettuce. 5. The white-flowered, dwarf, wild Lettuce. 6. The dandelion-leaved, wild Lettuce. 7. The broad-leaved, blue-flowered, wild Lettuce. 8. The tall, broad-leaved, American, wild Lettuce. 9. The purple-flowered, low, sinuated-leaved, wild Lettuce. 10. The roundish-leaved, garden Lettuce. 11. The long-leaved, garden Lettuce. From these two last species culture has raised a vast number of varieties, called also species by many.

HIERACHIUM.

THE receptacle is naked; the calyx is imbricated; the down is pappous, simple, and sessile.

Hierachium caule ramoso, foliis radicalibus ovatis dentatis, caulino minore. French
The ramose Hierachium, with the radical leaves dentated, the cauline smaller. Lungwort.

The root is fibrated: the plant rises to two feet high: the radical leaves are oblong, oval, very hairy, and dentated: the stalk is robust, hairy, ramose, and, at it's extremities, is ornamented with large, yellow flowers.

It is common on walls. C. Bauhine calls it, Hierachium murorum folio pilosissimo.

The other species are very numerous: there are, 1. The great, narrow-leaved, smooth Hierachium. 2. The little, yellow-flowered Hierachium. 3. The yellow, hairy Hierachium, with large flowers. 4. The dandelion-leaved Hierachium. 5. The bulbous, endive-leaved Hierachium. 6. The small-flowered, dandelion-leaved Hierachium. 7. The little, pale red-flowered Hierachium. 8. The rough, succory-leaved Hierachium. 9. The smooth, succory-leaved Hierachium. 10. The coronopus-leaved Hierachium. 11. The hairy, dandelion-leaved, taller Hierachium. 12. The broader-leaved Hierachium. 13. The Hierachium, called Sonchus lanatus. 14. The yellow, endive Hierachium. 15. The great, flowered, white, endive Hierachium. 16. The narrower-leaved, hairy Lungwort. 17. The pilosella-leaved, erect Hierachium. 18. The narrow-leaved, umbellated Hierachium. 19. The common Pilosella. 20. The purple Hierachium. 21. The statice-leaved, naked-stalked Hierachium. 22. The statice-leaved, leafy-stalked Hierachium. 23. The vesicose Hierachium. 24. The broad-leaved, smooth Hierachium. 25. The turnep-leaved, rough Hierachium. 26. The conyza-leaved Hierachium. 27. The great-flowered, hairy, mountain Hierachium. 28. The dwarf, succory-leaved Hierachium. 29. The broad-leaved, bush Hierachium. 30. The narrow-leaved, bush Hierachium. 31. The rigid-stalked, erect, narrow-leaved Hierachium. 32. The narrow, hoary-leaved Hierachium. 33. The doronicum-leaved Hierachium. 34. The lampsana-leaved Hierachium. 35. The blattaria-leaved Hierachium. 36. The cernith-leaved Hierachium. 37. The round-leaved, amplexicaule Hierachium. 38. The narrow, amplexicaule-leaved Hierachium. 39. The scorzonera-leaved Hierachium.

PICRIS.

THE receptacle is naked; the calyx is imbricated; the down is plumose: the seeds are furrowed cross-wise.

This genus comprehends the Helminthotheca of Vaillant.

Picris

Picris perianthiis involucro magno cinctis. Langue
The Picris, with the cup ſurrounded by a great involucrum. de Beuf.

The root is oblong and fibrated: the leaves are three inches long, narrow, ſinuated, and very rough to the touch: the plant riſes to a foot and a half high: the ſtalks are ramoſe, and thick-ſet with leaves: the flowers are moderately large, and yellow, and are ſurrounded by an involucrum, which gives the whole greatly the appearance of the head of the carduus benedictus, but that it is ſmaller.

It is common by ditch-ſides. C. Bauhine calls it, Hierachium echioides capitulis cardui benedicti.

The other ſpecies are, 1. The rough, laciniated, Cretic Picris, called by moſt authors a Sonchus. 2. The rough Picris, with large flowers, common about the edges of corn-fields.

SCORZONERA.

THE receptacle is naked: the calyx is imbricated; the down is plumoſe: the ſquammæ which form the cup have membranaceous edges.

Scorzonera caule ramoſo, foliis amplexicaulibus integris undulatis. Great Viper's-graſs.
The branched Scorzonera, with undivided, undulated, amplexicaule leaves.

The root is oblong, white, and large: the plant riſes to three feet high: the ſtalks are round, robuſt, of a bluiſh-green colour, and ramoſe: the leaves are oblong, broad, of a ſtrong green colour, undulated, but not divided at the edges: the flowers are large and yellow; they ſtand at the extremities of very long branches: the root is eſculent.

It is a native of Spain. C. Bauhine calls it, Scorzonera latifolia ſinuata.

The other ſpecies of Scorzonera are, 1. The lower, broad-leaved Scorzonera. 2. The broad and nervous-leaved, low Scorzonera. 3. The tall, narrow-leaved Scorzonera. 4. The low, narrow-leaved Scorzonera. 5. The blue-flowered, narrow-leaved Scorzonera. 6. The thick-leaved Montpelier Scorzonera. 7. The duſty-flowered, marſh Scorzonera. 8. The jagged-leaved Scorzonera. 9. The capillaceous-leaved Scorzonera. 10. The plantain-leaved Scorzonera. 11. The graſſy-leaved, pale yellow-flowered Scorzonera.

LEONTODON.

THE receptacle is naked; the calyx is imbricated; the down is plumoſe, and the ſquammæ which form the cup are ſolid, not membranaceous, at the edge.

This genus comprehends the Dens Leonis of Tournefort, and Taraxaconoides of Vaillant.

Leontodon foliis frequentius inciſis. Jagged
The laciniated-leaved Leontodon. Dandelion.

The root is long, brown, thick, and fibrated: the leaves are numerous, four or five inches long, an inch and a half broad, divided into narrow ſegments, and thoſe ſubdivided each into two or three others toward the extremity: the ſtalks are numerous, ſlender, hollow, naked, and of a pale green colour; on the ſummit of each ſtands a ſmall yellow flower.

It is a native of Germany. C. Bauhine calls it, Dens Leonis tenuiſſimo folio.

The other ſpecies are, 1. The common Dandelion. 2. The leafy-ſtalked, great Leontodon. 3. The ſmall, narrow-leaved, reddiſh-ſeeded Leontodon. 4. The roundiſh-leaved Leontodon. 5. The aſphodel-rooted Leontodon. 6. The little, rough Leontodon. 7. The radiated-leaved Leontodon. 8. The bulbous-rooted Leontodon. 9. The hoary-leaved Leontodon. 10. The long-leaved, rough, naked-ſtalked Leontodon. 11. The leſs divided-leaved, ſtone Leontodon. 12. The little, dry-leaved, hairy Leontodon.

ontodon. 13. The ſmall-flowered, downy Leontodon. 14. The piloſella-leaved, mountain Leontodon. 15. The dwarf, ſmooth Leontodon. 16. The dwarf, rough Leontodon. 17. The great-leaved Leontodon.

SONCHUS.

THE receptacle is naked; the cup is imbricated; the down is plumoſe, and the calyx ventricoſe.

Sonchus caule erecto, foliis pinnato-haſtatis, floribus congeſtis villoſis. **Great, marſh Sow-thiſtle.**

The erect, haſtated-leaved Sonchus, with cluſtered, hairy flowers.

The root is long, creeping, perennial, and full of a milky juice: the plant riſes to ten feet high: the leaves are eight inches long, divided at the edges like thoſe of dandelion, and haſtated at the extremity: the flowers ſtand at the tops of the branches; they are large, numerous, of a deep yellow colour, and hairy.

It is common in our ſalt marſhes, and elſewhere. C. Bauhine calls it, Hierachium majus folio Sonchi.

The other ſpecies are, 1. The undivided-leaved, prickly Sonchus. 2. The dandelion-leaved, prickly Sonchus. 3. The dipſacus-leaved, prickly Sonchus. 4. The Cretic, prickly Sonchus. 5. The rough, broad-leaved Sonchus. 6. The broad-leaved, ſmooth Sonchus. 7. The fine divided-leaved, ſmooth Sonchus. 8. The lightly ſinuated-leaved, ſmooth Sonchus. 9. The narrow-leaved, ſmooth Sonchus. 10. The narrow-leaved, ſea Sonchus. 11. The poppy-leaved Sonchus.

HYPOCHÆRIS.

THE receptacle is paleaceous; the calyx is imbricated; the down is plumoſe. This genus comprehends the Achyrophorus of Vaillant.

Hypochæris calycibus æqualibus hiſpidis.
The rough, equal-cupped Hypochæris.

The root is oblong, ſlender, and white: the plant grows to ſeven inches high: the ſtalk is round, green, and ſlender: the leaves are of an obverſely oval figure, the narrower extremity terminating in a pedicle: the flowers ſtand ſingly on the tops of the branches; they are moderately large and yellow: the whole plant has a number of long, white, looſe hairs at diſtances upon it.

It is a native of Crete. Ray calls it, Hierachium ramoſum foliis oblongis, obtuſis, &c. Vaillant, Achyrophorus fere glaber, bellidis glauco dentatoque folio.

The other ſpecies are, 1. The ſmooth, dandelion-leaved Hypochæris. 2. The broader-leaved, large-flowered Hypochæris.

CATANANCE.

THE receptacle is paleaceous; the cup is imbricated; the down ariſes from a little calyx, terminated by five ſetæ, or hairs.

Catanance ſquammis calycinis inferioribus lanceolatis.
The Catanance, with the lower leaves of the cup lanceolated.

The root is fibrous: the radical leaves are broad and nervous: the ſtalk is round, ramoſe, and ſmooth; the leaves on it are deeply ſinuated at the edges: the flowers ſtand at the extremities of the branches; they are large and yellow, and in ſhape much reſemble thoſe of the cyanus, or blue-bottle.

It is a native of Crete. Boccone calls it, Chondrilla cyanoides lutea coronopi folio.

The

The other ſpecies are, 1. The blue Catanance, with ſinuated leaves. 2. The willow-leaved Catanance. 3. The broad, undivided-leaved Catanance.

SCOLYMUS.

THE receptacle is paleaceous; the calyx is imbricated; there is no down to the ſeed.

Scolymus annuus.
The annual Scolymus.

The root is eſculent, large, oblong, and of a yellowiſh-brown colour, and full of a milky juice: the plant riſes to four feet high: the leaves are oblong, ſinuated, prickly, and often blotched with white; the ſtalk alſo is very prickly: the flowers are large, and of a beautiful yellow colour; they ſtand in the alæ of the leaves.

It is a native of France. Vaillant calls it, Scolymus chryſanthemus annuus.

The other ſpecies are, 1. The lower, perennial-rooted Scolymus. 2. The tall, African Scolymus.

CICHOREUM.

THE receptacle is paleaceous; the calyx is calyculated; the margin of the down is quinquedentated.

Cichoreum caule ſimplici, foliis dentato-ſinuatis. Wild Succory.
The ſimple-ſtalked Cichoreum, with dentato-ſinuated leaves.

The root is oblong, thick, and full of a milky juice: the ſtalks are numerous, two or three feet high, and ramoſe: the leaves are three inches long, and a little more than an inch broad, variouſly ſinuated at the edges: the flowers are large, and of a beautiful blue colour; they grow without pedicles, from the ſides of the ſtalks.

It is common by way-ſides. C. Bauhine calls it, Cichoreum ſylveſtre, ſive officinarum.

The other ſpecies are, 1. The common, blue-flowered, broad-leaved, garden Cichoreum. 2. The garden Cichoreum, called Endive. 3. The narrow-leaved Endive. 4. The prickly, Cretic Endive. 5. The large and deeply divided-leaved Cichoreum.

ANDRYALA.

THE receptacle is hairy; the calyx is divided into many parts; the down is ſimple and ſeſſile.

This genus comprehends the Eriophorus of Vaillant.

Andryala foliis integris. Woolly Hawkweed.
The undivided-leaved Andryala.

The root is large, oblong, and fibrated: the plant riſes to two feet in height: the ſtalk is robuſt, thick, hairy, and ramoſe: the leaves are two inches and a half long, very narrow, like thoſe of the cyanus, and covered with a white, downy matter: the flowers ſtand on the extremities of the branches; they are of a bright yellow colour, but not large.

It is a native of Sicily. C. Bauhine calls it, Sonchus lanatus luteus major.

ELEPHANTOPUS.

THE receptacle is naked; the corollulæ ſtand in a ſimple ſeries, and are divided into five ſegments.

Elephantopus foliis ovatis serratis. **Bastard Scabious.**
The oval, serrated-leaved Elephantopus.

The root is long and thick: the plant rises to four feet high: the stalk is thick, round, striated, and hairy: the leaves are five inches long, and two broad, largest in the middle, and terminate in a point; they are dentated at the edges, hairy on the upper surface, and corrugated underneath: the flowers are large, round, and white.

It is a native of Jamaica. Ray calls it, Scabiosæ affinis anomala enulæ folio.

Class the Ninteenth. Order the First.

Division the Second.

Syngenesia Polygamia Æqualis, the corollulæ tubipetalous.

ECHINOPS.

THE proper calyx, containing a single flower, is imbricated and erect; many of these simple ones are often contained in one common, or general, cup.

This genus comprehends the Echinopus of Tournefort.

Echinops floribus capitatis, calycibus unifloris. **The Globe-thistle.**
The capitated-flowered Echinops, with uniflorous cups.

The root is oblong, thick, and blackish: the plant grows to two feet high: the stalk is thick, striated, and covered with purple hairs: the leaves are long, narrow, sinuated at the edges, and hairy: the flowers stand on the extremities of the branches, in large, round heads; they are small and blue.

It is a native of Italy. C. Bauhine calls it, Echinopus major; others, Carduus globosus.

The other species are, 1. The lesser, blue-flowered Echinops. 2. The little, annual Echinops, with very large heads. 3. The ilex-leaved, shrubby, American Echinops, flowering at the alæ.

GUNDELIA.

THE common receptacle is divided, every division having five flowers: the paleæ are divided at their extremity into three points.

It is an oriental, and is sufficiently distinguished by these characters, without a farther description.

ARCTIUM.

THE calyx is globose; the squammæ of it are terminated by hooked filaments.

This genus comprehends the Lappa of Tournefort and others.

There is but one known species of it.

ARCTIUM. **The Bur-dock.**

The root is very long, and an inch in diameter: the leaves stand on long pedicles, and are often a foot and a half long, a foot wide near the base, and of a greyish-green colour: the stalk rises to five feet high; it is firm, tough, striated, and ramose: the flowers are small and whitish; the heads roundish, and adhering to every thing that touches them.

It is common by way-sides. C. Bauhine calls it, Arctium, sive Lappa major. The heads vary greatly in size, and are sometimes more, sometimes less, rough: from these, and other variations, owing wholly to accident, authors have raised several imaginary new species of this plant, though nature made but one.

SERRATULA.

THE calyx is of a nearly cylindric figure, beautifully imbricated, and ſmooth.

Serratula foliis pinnatifidis, lacinia terminatrice maxima. **Saw-wort.**
The pinnatifid-leaved Serratula, with the extreme ſegment largeſt.

The root is oblong, firm, tough, and fibrated: the plant riſes to two feet, or more, in height: the ſtalk is ſlender, ſtriated, and ramoſe: the leaves are very irregularly pinnated; the terminating lobe is always the largeſt, ſometimes it is almoſt the whole leaf, the lateral pinnæ ſcarce at all appearing; and ſometimes it appears alone in form of a ſimple, oval leaf: the flowers are naturally red, often white.

It is a native of our woods and thickets. C. Bauhine calls it, Serratula vulgaris. Authors have divided it into ſeveral ſpecies, from the variations in the ſerratures and pinnatures of the leaves, and the colour of the flowers.

The other ſpecies are, 1. The oblong, lanceolated-leaved Serratula, called the Jacea perſicæ folio. 2. The dentated, ſpinoſe Serratula, called the hæmorrhoidal Thiſtle. 3. The great, woolly-headed, Ruſſian Serratula.

ONOPORDON.

THE receptacle is naked; the ſquammæ of the cup are mucronated.

Onopordon foliis decurrentibus margine ſpinoſis. **Cotton Thiſtle.**
The Onopordon, with decurrent, ſpinoſe leaves.

The root is long, white, and tough: the leaves are very large, oblong, ſinuated, and ſerrated at the edges, the ſerratures terminating in ſpines; they are of a white colour, and cottony appearance; the radical ones are often a foot and a half long: the ſtalk is round, ſtriated, firm, white, and four or five feet high: the leaves are alternate, and like the radical ones, and run down the ſtalk at their baſe, forming ridges: the heads are large; the flowers of a beautiful purple colour.

The plant is common with us by way-ſides. C. Bauhine calls it, Spina alba tomentoſa latifolia vulgaris; others, Acanthium vulgare.

The other ſpecies are, 1. The tall, Portugal Onopordon. 2. The narrow-leaved Onopordon. 3. The great-flowered Onopordon. 4. The many-flowered Onopordon. 5. The longer-leaved Onopordon. 6. The more ſpinoſe Onopordon.

CARDUUS.

THE calyx is of an ovated figure, and imbricated with ſpinoſe ſquammæ.

Carduus ſquammis calycinis margine et apice ſpinoſis. **Ladies Thiſtle.**
The Carduus, with the ſquammæ of the cup ſpinoſe at the ſides and ends.

This is one of the moſt beautiful of the Engliſh plants, and wants only to have been a native of a diſtant part of the world to have given it a place in our gardens: the root is long, thick, and white: the radical leaves are two feet long, and more than a foot broad, elegantly ſinuated, and ſerrated at the edges, the ſerratures prickly, and the whole leaf of a fine bright and ſtrong green colour, beautifully variegated with irregular veins of a milk-white: the ſtalk is round, ſtriated, an inch in diameter, and five or ſix feet high: the leaves are like the radical ones: the flowers at the tops of the branches are very numerous and very large; the cups elegantly ſquammoſe and prickly, the corollæ purple.

It is common by way-ſides. C. Bauhine calls it, Carduus albis maculis notatus vulgaris; others, Carduus Mariæ.

The other ſpecies are, 1. The ſpear Thiſtle, or lanceolated pointed-leaved Carduus. 2. The woolly and round-headed Carduus. 3. The Carduus, with a bending head. 4. The

decurrent-

decurrent-leaved, very prickly Carduus. 5. The cluſter-headed Carduus. 6. The Carduus, called the great Cirſium, or gentle thiſtle. 7. The common, many-headed, meadow Carduus. 8. The ſtellate-headed Carduus. 9. The broad, laciniated-leaved Carduus. 10. The yellow, narrow-leaved Carduus. 11. The purple, ſtellate Carduus, with undivided leaves. 12. The little-headed Carduus. 13. The yellow, broader-leaved Carduus. 14. The eryngium-leaved Carduus. 15. The yellowiſh, red, hoary Carduus. 16. The round-headed, divided-leaved Carduus. 17. The ſuccory-leaved Carduus. 18. The rocket-leaved Carduus. 19. The conglobate-headed Carduus. 20. The coronopus-leaved Carduus. 21. The turnep-leaved Carduus. 22. The aſphodel-rooted, ſoft Carduus. 23. The laciniated-leaved Cirſium. 24. The Cirſium, with a large head, and large ſquammæ. 25. The hairy, compact-flowered Carduus. 26. The narrow, undivided-leaved Carduus. 27. The finely divided-leaved Cirſium. 28. The ſonchus-leaved Cirſium. 29. The dock-leaved Cirſium. 30. The ſerratula-leaved Cirſium. 31. The dwarf Cirſium. 32. The burdock-leaved Cirſium.

CYNARA.

THE calyx is dilated, imbricated; and formed of ſquammæ of a fleſhy ſtructure, emarginated and pointed.

This genus comprehends the Cynara and Scolymus of authors.

Cynara foliis pinnatis, laciniis ſerratis.
The Cynara, with pinnated and ſerrated leaves.

The Artichoke and Chardon.

The root is oblong and fibrated; the leaves are a foot and half long, eight inches broad, and of a pale greyiſh-green; they are deeply laciniated or pinnatifid, and the ſegments or pinnæ ſerrated at the edges: the ſtalk riſes to two feet high; it is thick, tough, ſtriated, and hoary: the heads ſtand on the extremity of the branches; they are very large, and the corollæ purple.

This plant varies in the having it's leaves prickly, and divided into narrower ſegments. It is in this ſtate that our gardeners blanch it's ſtalks for the table, under the name of *Chardon*; and ſome have eſteemed theſe two different ſpecies, but experiment ſhews, that they will both riſe from the ſeeds of the ſame head.

The other ſpecies are, 1. The broad-leaved, wild Cynara. 2. The very prickly, blue-flowered, ſmaller-headed Cynara. 3. The ſmaller Cynara of Candy.

CARLINA.

THE calyx is broad; the marginal ſquammæ are long, coloured, and reſemble the radius of a flower.

Carlina caule unifloro.
The Carlina, with a ſingle flower.

Carline Thiſtle.

The root is large, thick, and creeping; the leaves are numerous; they lie on the ground in a radiated manner, and are ſix inches long, an inch and a half broad, deeply divided, and as it were curled at the edges, and very prickly: the flowers are purple; the heads are large and very prickly, but they have no viſible pedicle. Though this ſpecies have no ſtalk in it's common ſtate, the head growing ſeſſile in the center of the leaves; if planted cloſe in pots, it will riſe to a foot high.

It is found on our heaths. C. Bauhine calls it, Carlina acaulos magno flore. It's root was once kept in the ſhops, as an alexipharmic and aſtringent, but it is now out of uſe.

The other ſpecies are, 1. The taller, many-flowered, wild Carlina. 2. The great, gummy Carlina. 3. The tall, deeply, ſerrated-leaved Carlina. 4. The tall, many-headed Carlina. 5. The yellow-flowered, perennial Carlina. 6. The little, yellow, patulous-flowered Carlina. 7. The ſhorter-leaved, patulous-flowered Carlina. 8. The umbellated, Italian Carlina. 9. The great, purple, patulous-flowered Carlina.

CAR-

CARTHAMUS.

THE calyx is of an oval figure, and imbricated; the ſquammæ are of an oval figure, and foliaceous at the extremity.

Carthamus foliis ovatis integris ſerrato-aculeatis. **Baſtard Saffron.**
The Carthamus, with undivided, oval, ſerrato-aculeate leaves.

The root is oblong and white; the plant riſes to two feet high; the ſtalk is ſlender and round: the leaves are two inches long, more than an inch broad, obtuſe at the end, ſerrated, and prickly round the edges: the heads are large, and ſurrounded with leaves: the flowers are of a reddiſh yellow or ſaffron colour: the ſeeds are large, long, and white.

It is a native of Egypt. C. Bauhine calls it, Cnicus vulgaris, ſive Carthamus officinarum. It's ſeeds were once in uſe as a cathartic, but are now neglected.

The other ſpecies are, 1. The woolly-ſtalked, dentated-leaved Carthamus, the yellow Atractylis of authors. 2. The leſſer, blue Carthamus. 3. The great, blue, prickly Carthamus. 4. The dwarf, purple Carthamus. 5. The long, ſerrated-leaved-Carthamus. 6. The broad, ſhorter-leaved Carthamus.

CNICUS.

THE calyx is of an oval figure and imbricated: the ſquammæ are ramoſe and prickly, and equal the corollæ in length.

This genus comprehends the Acarna of Vaillant.

Cnicus caule diffuſo foliis dentato-ſinuatis. **Carduus Benedictus.**
The diffuſe-ſtalked Cnicus, with dentated and ſinuated leaves.

The root is oblong, white, and ſlender: the plant grows to two feet high: the ſtalks are ſtriated, ſlender, ramoſe, and diffuſe: the leaves are numerous, four inches long, an inch and a half broad, ſinuated, and dentated at the edges, and they ſurround the ſtalk at their baſe; the heads are large, prickly, and ſurrounded with leaves: the flowers are yellow: the ſtalks of the plant are often yellowiſh or reddiſh; the leaves of a ſtrong green.

It is a native of the Eaſt, but thrives very well in our gardens. C. Bauhine calls it, Cnicus ſylveſtris hirſutus, ſive Carduus Benedictus. An infuſion of the leaves of this plant is given to work off emetics; it is alſo eſteemed a cardiac and alexipharmic, but is not uſed as ſuch with us.

The other ſpecies are, 1. The cordated-leaved, Siberian Cnicus. 2. The yellow, or purple-flowered, acanthus-leaved Cnicus. 3. The blue, prickly Cnicus. 4. The Cnicus, with leaves variegated with white. 5. The dwarf, purple, prickly Cnicus. 6. The many-headed Cnicus.

ATRACTYLIS.

THE corollulæ are radiated, and thoſe of the radius are divided into five ſhort ſegments at the mouth.

The characters ſufficiently diſtinguiſh the Atractylis from all the other genera, without a farther deſcription.

STÆBE.

THE receptacle is paleaceous; the down is plumoſe: there is a peculiar cup formed of five leaves, ſurrounding each flower below the germen.

Theſe characters ſufficiently alſo diſtinguiſh the Stæbe, without a farther deſcription.

STÆHELINA.

THE receptacle is paleaceous; the down is plumoſe: the calyx is oblong and imbricated; the ſquammæ are membranaceous and reflex at their extremities.

Theſe characters ſufficiently diſtinguiſh the Stæhelina, without a farther deſcription.

BIDENS.

THE receptacle is paleaceous; and the ſeeds are armed with erect, ſcabrous, or prickly ariſtæ.

This genus comprehends the Bidens of Tournefort, and the Ceratocephalus of Vaillant.

Bidens corona ſeminum retrorſum aculeata, foliis trifidis.

The trifid-leaved Bidens, with the corona of the ſeeds prickly downwards.

Water hemp Agrimony.

The root is compoſed of a multitude of large fibres: the plant riſes to three feet high: the ſtalk is round, ramoſe, and uſually reddiſh; the leaves are three or four inches long, and are uſually divided into three parts, ſometimes into five, and ſometimes not divided at all; they are ſmooth, deeply ſerrated at the edges, and have broad pedicles, with which they embrace the ſtalk: the flowers are numerous and yellow; their cups purpliſh: the ſeed is oblong and broad, and has three prickles at it's top, which are bearded with leſſer prickles pointed downwards.

It is common in wet places. C. Bauhine calls it, Cannabina aquatica folio tripartito diviſo. The ſeeds of this ſpecies are figured and deſcribed in the Philoſophical Tranſactions, under the name of ſtrange Aquatic Animals.

The other ſpecies are, 1. The undivided-leaved Bidens. 2. The broad-leaved, yellow, American Bidens. 3. The ſmallage-leaved, American Bidens. 4. The alated-ſtalked Bidens. 5. The daiſy-flowered Bidens. 6. The American Bidens, with round, bullated leaves. 7. The ſhrubby, ilex-leaved Bidens. 8. The ſphondylium-leaved Bidens. 9. The trifoliate, radiated, flowered Bidens. 10. The ſmaller-flowered Bidens.

SANTOLINA.

THE receptacle is paleaceous; the down is very ſhort: the calyx is of a hemiſpheric figure, and imbricated.

Santolina foliis quadrifariam dentatis, pedunculis unifloris.

The quadrifariouſly dentated-leaved Santolina, with ſingle flowers on the peduncles.

Lavender Cotton.

The root is long, large, and brachiated, woody and brown: the plant grows to two feet high; the ſtem and branches are tough and woody: the leaves are an inch long, ſlender, and dentated four ways at once; they are of a whitiſh colour, as are alſo the young ſhoots, and of a ſtrong ſmell: the flowers are ſmall and yellow, and ſtand ſingly on the pedicles.

It is a native of France and Spain; it is common in our gardens. C. Bauhine calls it, Abrotanum fœmina foliis teretibus.

The other ſpecies are, 1. The trifid-leaved, African Santolina, called ſhrubby Coma aurea. 2. The hairy Santolina, with larger flowers. 3. The ſavin-leaved Santolina. 4. The cypreſs-leaved Santolina. 5. The hoary, creeping Santolina. 6. The green-leaved, pale, yellow Santolina. 7. The great, roſemary-leaved Santolina. 8. The large, coronopus-leaved Santolina. 9. The chamomile-leaved, Spaniſh Santolina.

TARCHONANTHUS.

THE receptacle is hairy; the down is plumoſe: the calyx is formed of a ſingle leaf, lightly divided into ſeven ſegments at the extremity.

Theſe characters ſufficiently diſtinguiſh the Tarchonanthus, without a farther deſcription.

TANACETUM.

THE receptacle is naked; there is no down to the ſeeds: the calyx is imbricated and hemiſpheric.

This genus comprehends the Tanacetum and the Balſamita of authors.

Tanacetum foliis ovatis integris ſerratis.
The Tanacetum, with oval, undivided, ſerrated leaves. **Coſtmary.**

The root is oblique and creeping: the plant riſes to two or three feet high; the ſtalks are round, ſtriated, and of a greyiſh-green: the leaves are two inches long, an inch and a half broad, of a greyiſh-green, and ſerrated about the edges; the flowers ſtand in a kind of umbels at the extremities of the branches; they are ſmall and yellow.

It is a native of Tuſcany. C. Bauhine calls it, Mentha hortenſis corymbifera; others, Balſamita mas.

The other ſpecies are, 1. The common Tanzy. 2. The finer-leaved Tanacetum.

AGERATUM.

THE receptacle is naked; the down has five ariſtæ: the calyx is oblong and ſubequal.

Of this genus there is but one known ſpecies. The Agerata of authors are Achilleæ.

AGERATUM.

The root is fibrous: the plant grows to a foot high; the ſtalks are round and firm; the leaves are two inches long, broadeſt at the baſe, and ſerrated round the edges: the flowers ſtand on the extremities of the branches, and are white.

It is a native of America. Tournefort calls it, Conyza lamii folio, flore albo.

CHRYSOCOMA.

THE receptacle is naked; the down is ſimple; the calyx is hemiſpheric and imbricated.

This genus comprehends the Coma aurea of Boerhaave.

Chryſocoma foliis oblongis anguſtis, floribus congeſtis.
The cluſter-flowered Chryſocoma, with oblong, narrow leaves.

The root is fibrous; the plant riſes to two or three feet high: the ſtalk is round, firm, and erect; the leaves are numerous, oblong, narrow, and of a pale green: the flowers ſtand on the ſummits of the main ſtalk and branches, in form of large umbels; they are ſmall, and of a fine bright yellow.

It is a native of Germany. J. Bauhine calls it, Linaria aurea Trogi, ſive Linaria tertia; others, Coma aurea Germanica.

The other ſpecies are, 1. The ſhrubby, African, narrow-leaved Chryſocoma. 2. The ſamphire-leaved Chryſocoma. 3. The trifid-leaved, ſhrubby, African Chryſocoma. 4. The multifid-leaved, African Chryſocoma. 5. The very narrow, long, and trifid-leaved, ſhrubby, African Chryſocoma. 6. The ſucculent, digitated-leaved, ſhrubby Chryſocoma. 7. The larger-leaved, ſweet-ſcented, African Chryſocoma.

KLEINIA.

KLEINIA.

THE receptacle is naked; the down is ſimple; the calyx is calyculate and cylindric.

Kleinia caule herbaceo, foliis haſtato-ſagittatis, petiolis ſuperne dilatatis.
The Kleinia, with an herbaceous ſtalk, and haſtato-ſagittated leaves, their pedicles dilated upwards.

The root is fibrated and perennial; the plant riſes to ſix feet high: the ſtalk is ſtriated, erect, and not ramoſe: the leaves are broadeſt at the baſe, and terminate in a point; they are of a ſagittated figure, and dentated round the edges; the pedicles are alated at the upper part: the flowers are moderately large and white; they ſtand in cluſters like umbels at the extremities of the ſtalk and branches.

It is a native of Virginia. Gronovius calls it, Porophyllum foliis deltoidibus angulatis.

The other ſpecies are, 1. The ſhorter-leaved Kleinia. 2. The ſmaller-flowered Kleinia.

EUPATORIUM.

THE receptacle is naked; the down is plumoſe; the calyx is oblong and imbricated; the ſtyle is ſemibifid.

Eupatorium foliis digitatis. **Common Hemp Agrimony.**
The digitated-leaved Eupatorium.

The root is oblique, creeping, and fibrated: the plant riſes to four or five feet high; the ſtalk is round, erect, woolly, and of a purpliſh green; the leaves are placed three on a pedicle uſually, and are oblong, dentated, and rough, and of a pale green: the flowers are ſmall, and of a pale red; they ſtand in very large cluſters at the tops of the ſtalk and branches.

It is common by waters. C. Bauhine calls it, Eupatorium cannabinum.

The other ſpecies are, 1. The nettle-leaved Eupatorium. 2. The white-flowered, betony-leaved Eupatorium. 3. The ſage-leaved, perfoliate Eupatorium. 4. The mullein-leaved Eupatorium. 5. The woolly, nettle-leaved Eupatorium. 6. The atriplex-leaved ſhrubby Eupatorium. 7. The purple-flowered, Sophia-leaved Eupatorium. 8. The ground-ivy-leaved Eupatorium. 9. The petaſitis-leaved Eupatorium. 10. The long, rugoſe-leaved, purple-ſtalked Eupatorium.

Claſs the Nineteenth. Order the Second.

SYNGENESIA POLYGAMIA SUPERFLUA.

Plants in which the flowers of the diſk are hermaphrodites, and have ſtigmata, and produce ſeeds; and thoſe of the radius are females, and produce ſeeds alſo.

THE plants called Herbæ flore floſculoſo, and Flore radiato of Tournefort, are of this order of the Syngeneſia; the genera may therefore be properly arranged, according to that obvious diſtinction, into two diviſions.

Claſs

Class the Nineteenth. Order the Second.

Division the First.

Syngenesia Polygamia Superflua, with flosculous flowers.

ARTEMISIA.

THE receptacle is somewhat hairy; there is no down to the seeds: the calyx is imbricated, and it's squammæ are rounded and connivent.
This genus comprehends the Abrotanum and Absynthium of authors.

Artemisia foliis pinnatifidis planis laciniatis, floribus erectis.
The Artemisia, with pinnatifid, plane, laciniated leaves, and erect flowers. **Common Mugwort.**

The root is long, thick, and fibrated: the plant grows to four feet high; the stalk is round, striated, and often purplish: the leaves are divided into a multitude of oblong and narrow segments, and are of a dark, blackish-green on the upper side, and hoary underneath: the flowers grow in long clusters about the tops of the stalks and branches, and are small, and whitish, or purplish.

It is common by way-sides. C. Bauhine calls it, Artemisia vulgaris major caule et flore purpurascentibus. It has been esteemed a deobstruent and uterine, but is not used much at present.

The other species are, 1. The lanceolato-linear-leaved Artemisia, called Dracunculus and Tarragon. 2. The erect Artemisia, with ramose, setaceous leaves, called Abrotonum Mas, or common Southernwood. 3. The five-leaved, hoary Artemisia, called Pontic Wormwood. 4. The tanzy-leaved, strong-scented Artemisia. 5. The narrower-leaved Abrotanum. 6. The great, hoary Abrotanum. 7. The little, narrow-leaved Abrotanum. 8. The fine-leaved, mugwort, or field Abrotanum. 9. The yellow-flowered, dwarf Abrotanum. 10. The thick, rigid, shining-leaved, sea Abrotanum. 11. The hoary, soft Abrotanum. 12. The spiked Abrotanum. 13. The common, large Wormwood. 14. The broad-leaved, shrubby Wormwood. 15. The narrow-leaved, hoary Wormwood. 16. The Wormwood, with leaves hoary underneath. 17. The very, fine-leaved Wormwood. 18. The lavender-leaved Wormwood. 19. The common, sea Wormwood. 20. The broader-leaved, sea Wormwood. 21. The long-leaved Wormwood. 22. The hoary, mountain Wormwood. 23. The dwarf, mountain Wormwood. 24. The Abrotanum-leaved, corymbiferous Wormwood. 25. The long-flowered, Spanish Wormwood. 26. The round-flowered, Spanish Wormwood. 27. The hoary, arborescent, vermiculated-leaved, African Wormwood. The Wormwoods are all stomachics, and are used in tinctures and infusions.

GNAPHALIUM.

THERE is no receptacle; the down is plumose: the calyx is imbricated, and the marginal squammæ are roundish and membranaceous.
This genus comprehends the Gnaphalium, Elychrysum, and Filago of authors.

Gnaphalium floribus sparsis per caulem simplicissimum.
The simple-stalked Gnaphalium, with scattered flowers. **English Cudweed.**

The root is composed of a few hard, blackish fibres: the stalk is round, white, slender, erect, and a foot, or more, in height; it has no branches: the leaves are an inch and half long, of the breadth of a straw, white, hoary, and soft to the touch: the flowers stand in the alæ of the leaves, all up the stalk, in roundish heads of a dusky colour.

It is common in our woods. C. Bauhine calls it, Gnaphalium majus angusto oblongo folio alterum; others, Gnaphalium Anglicum.

The other ſpecies are, 1. The long-leaved, black-headed Gnaphalium. 2. The round-flowered, mountain Gnaphalium, called Cat's-foot. 3. The common Gnaphalium, called Herba impia. 4. The great, long-leaved Gnaphalium. 5. The little, ſhort-leaved Gnaphalium. 6. The large-flowered, Alpine Gnaphalium. 7. The oblong, folioſe-headed, mountain Gnaphalium. 8. The folioſe-headed, ſea Gnaphalium. 9. The very, fine-leaved, ſmall-headed, erect Gnaphalium. 10. The woolly, ſea Gnaphalium.

Of thoſe called Elychryſa there are, 1. The narrow-leaved Elychryſum, or Stæchas citrina. 2. The five-leaved Elychryſum. 3. The narrow and few-leaved Elychryſum. 4. The umbellated, ſea Elychryſum. 5. The rough, trifid-leaved Elychryſum. 6. The ſingle-flowered, green-leaved Elychryſum. 7. The broad-leaved, ſmall, ſingle-flowered Elychryſum. 8. The broad-leaved Elychryſum, with a larger, ſingle flower. 9. The broad-leaved, wild Elychryſum, with conglobate heads. 10. The ramoſe, broad-leaved Elychryſum. 11. The elegant, oriental Elychryſum. 12. The reddiſh-yellow-cupped Elychryſum. 13. The narrow-leaved Elychryſum, with conglobated heads. 14. The broad-leaved, American Elychryſum. 15. The campion-leaved Elychryſum. 16. The ilex-leaved, ſhrubby Elychryſum. 17. The great, ſilvery-cupped, African Elychryſum. 18. The very narrow-leaved Elychryſum, with great, ſilvery cups. 19. The coris-leaved, ſhrub Elychryſum. 20. The roundiſh-leaved, woolly Elychryſum. 21. The yellow, umbellated Elychryſum. 22. The polium-leaved Elychryſum. 23. The narrow-leaved, red-flowered Elychryſum. 24. The roſemary-leaved Elychryſum. 25. The plantain-leaved Elychryſum. 26. The large-leaved, ſtinking Elychryſum. 27. The broad-leaved, dwarf Elychryſum. 28. The low, capillaceous-leaved Elychryſum.

XERANTHEMUM.

THE receptacle is ſetaceous; the down has five ſetæ: the calyx is imbricated and longo-radiate.

This genus comprehends the Xeranthemum and Xeranthemoides of authors.

Xeranthemum receptaculis paleaceis, foliis oblongis. **Auſtrian**
The long-leaved Xeranthemum, with paleaceous receptacles. **Sneezewort.**

The root is annual, oblong, blackiſh, woody, and fibrated: the plant riſes to a foot and half high; the ſtalk is ſlender and whitiſh; the leaves are oblong, narrow, ſoft, whitiſh, and hoary: the flowers ſtand at the extremities of the branches, and are large and elegant; they are dry and gloſſy, the cup is ſquammated, and of a ſilvery white; the flower whitiſh, with a caſt of a purpliſh blue.

It is a native of Germany and France. C. Bauhine calls it, Jacca oleæ folio, capitulis ſimplicibus; Cluſius, Ptarmica Auſtriaca. The flowers retain their beauty many years.

The other ſpecies are, 1. The hoary, white-flowered Xeranthemum. 2. The ſmall, purple-flowered Xeranthemum.

CARPESIUM.

THE receptacle is naked; there is no down to the ſeeds: the calyx is imbricated, and the exterior ſquammæ of it are reflex.

Of this genus there is but one known ſpecies.

CARPESIUM.

The root is compoſed of a multitude of large fibres: the leaves are four or five inches long, three inches broad, ſerrated, obtuſely pointed, and hairy: the ſtalk is erect and branched; toward the top it grows thick, and the flowers from the bending of this part droop downwards: the flowers are moderately large and yellowiſh.

It is a native of Italy. Ray calls it, Aſter cernuus; C. Bauhine, Aſter Atticus foliis circa florem mollibus.

BACCHARIS.

THE receptacle is naked; the down is ſimple; the calyx is imbricated and cylindric. Theſe characters ſufficiently diſtinguiſh the Baccharis: the plant commonly known by this name, however, is not of this genus, but is properly a conyza.

CONYZA.

THE receptacle is naked; the down is ſimple; the cup is imbricated and roundiſh.

1

Conyza foliis lanceolatis acutis, caule annuo corymboſo. **Plowman's Spikenard.**
The lanceolate, acute-leaved Conyza, with corymboſe ſtalks.

The root is oblong, thick, tough, and biennial: the plant riſes to two feet high: the ſtalks are round, robuſt, and ſomewhat hairy: the leaves are numerous, two or three inches long, broad, ſerrated, rough, and ſomewhat hoary: the flowers are ſmall and yellowiſh, or browniſh, and ſtand in umbels.

It is common by way-ſides with us. C. Bauhine calls it, Conyza major vulgaris; others, Baccharis Monſpelienſium.

Claſs the Nineteenth. Order the Second.

Diviſion the Second.

Syngeneſia Polygamia Superflua, with radiated flowers; the Herbæ Florę radiato of authors.

ERIGERON.

THE receptacle is naked; the down is ſimple; the radii of the corollula are very narrow, and linear.

This genus comprehends the Conyzella, Conyzoides, and ſome of the Senecio's of Dillenius.

Erigeron pedunculis unifloris lateralibus, calycibus ſquarroſis. **Great, ſweet Fleabane.**
The ſingle, lateral-flowered Erigeron, with ſquarroſe cups.

The root is large, thick, perennial, and fibrated: the ſtalk is ſhrubby, ramoſe, three feet high, and glutinous to the touch: the leaves are three inches long, and near an inch broad, of a pale green colour, hairy, lightly ſerrated, and viſcous to the touch: the flowers are yellow, and reſemble thoſe of the common ſenecio; they ſtand in a kind of ſpikes, at the tops of the branches.

It is common by way-ſides in Italy. C. Bauhine calls it, Conyza mas Theophraſti, major Dioſcoridis.

The other ſpecies are, 1. The toad-flax-leaved, annual, Canada Erigeron, or Conyza. 2. The coronopus-leaved, American Erigeron. 3. The ovato-lanceolate-leaved, camphorated Erigeron. 4. The ſhort-leaved Erigeron. 5. The ramoſe, longer-leaved, ſmall-flowered Erigeron. 6. The larger-flowered Erigeron.

SOLIDAGO.

THE receptacle is naked; the down is ſimple; the radii of the corollula are about five; the ſquammæ of the cup are imbricated and cloſed.

This genus comprehends the Virga aurea of Tournefort, and ſome of his Jacobææ, as alſo the Doriæ and Jacobæoides of authors.

Solidago

Solidago caule erecto, racemis alternis erectis.
The erect-ſtalked Solidago, with alternate, erect cluſters of flowers. **Common Golden-rod.**

The root is oblong, woody, and tough: the plant riſes to two feet high: the ſtalk is round, rigid, and of a purpliſh colour: the leaves are an inch and a half long, an inch broad, ſerrated, and of a duſky green colour: the flowers are very numerous, ſmall, and yellow; they ſtand in little cluſters, toward the top of the ſtalk, forming a kind of ſpike.

It is common on heaths and in woods. C. Bauhine calls it, Virga aurea vulgaris latifolia.

The other ſpecies are, 1. The narrow-leaved, mountain Solidago, with conglobated flowers. 2. The broad-leaved, ſerrated Solidago. 3. The narrow-leaved, not ſerrated Solidago. 4. The broad, ſmooth-leaved Solidago. 5. The rigid, bay-leaved Solidago. 6. The narrow-leaved, beautiful, panicled, American Solidago. 7. The narrow-leaved, American Solidago, with a leſs elegant pod. 8. The limonium-leaved Solidago, with the flowers on one ſide. 9. The very ſmall Solidago. 10. The leſſer, glutinous-leaved Solidago. 11. The long, narrow, and glutinous-leaved Solidago. 12. The aurited-leaved, purple-flowered Solidago. 13. The broad-leaved, purple Solidago, called New England After. 14. The undulated-leaved, purple Solidago. 15. The New England Solidago, with tripolium flowers. 16. The roundiſh, ſmooth, and ſerrated-leaved Solidago. 17. The broad, rigid-leaved, American Solidago. 18. The linaria-leaved, American Solidago. 19. The willow-leaved, American Solidago. 20. The great-flowered, American Solidago.

ASTER.

THE receptacle is naked; the down is ſimple; the radii of the corollula are more than ten; the lower ſquammæ of the cup are patulous.

This genus comprehends the After of Tournefort, and the Helenium and Afteropterus of Vaillant.

After foliis rugoſis amplexicaulibus, calycis ſquammis ovatis patulis.
The rugoſe, amplexicaule-leaved After, with the ſquammæ of the cup oval and patulous. **Elecampane.**

The root is a foot long, and two inches in diameter, brown on the outſide, white within, and of an aromatic taſte: the radical leaves are a foot and a half long, and ſix or ſeven inches broad, rugoſe, crenated, and hoary underneath: the ſtalks are five feet high, very thick, and robuſt; the leaves on them are numerous, and like the radical ones, but ſmaller: the flowers are very large, and yellow; they ſtand at the tops of the branches.

It is wild in ſome places with us, but is cultivated in gardens alſo, for the ſake of it's root, which is in great uſe in the ſhops as a pectoral. C. Bauhine calls it, Helenium vulgare; others, Enula campana.

The other ſpecies of After are, 1. The common, blue After, or After Atticus. 2. The round-leaved, hairy, great, blue-flowered After. 3. The oblong-leaved, great, blue-flowered After. 4. The dwarf, mountain After. 5. The narrow-leaved, tripolium-flowered After. 6. The blue, acrid, field After. 7. The great, blue After Atticus. 8. The little, blue After, or blue Flea-bane. 9. The willow-leaved After, called Tripolium. 10. The early, Pyrenæan, great-flowered After. 11. The ſmall, blue-flowered, tall, autumnal After. 12. The broad-leaved, umbellated After. 13. The tall, ramoſe, daiſy-leaved After. 14. The hyſſop-leaved After. 15. The ramoſe, annual After, called the umbelliferous Daiſy. 16. The great, yellow-flowered, hairy After. 17. The conyza-leaved After, commonly called Conyza media, and middle Fleabane. 18. The yellow, woolly-leaved, Dutch After. 19. The very hoary-leaved After. 20. The mullein-leaved, hairy After. 21. The glutinous, hyſſop-leaved After. 22. The long-leaved, mountain, yellow After. 23. The long, woolly-leaved After. 24. The ſea After, with thick, rounded, tridentated leaves, called Sampire, and

and golden-flowered Sampire. 25. The laciniated-leaved, marſh After. 26. The little, round-flowered After, or little Fleabane. 27. The tuberous-rooted, yellow, ſea After. 28. The ſmooth, willow-leaved After. 29. The primroſe-leaved After. 30. The jacobæa-leaved After.

INULA.

THE receptacle is naked; the down is ſimple; the antheræ terminate in ſetæ at their baſes.

Theſe characters ſufficiently diſtinguiſh the Inula from all other plants of this claſs, without a farther deſcription.

SENECIO.

THE receptacle is naked; the down is ſimple; the calyx is cylindric and calyculate, and the ſummit of the baſe ſphacelated.

This genus comprehends the Senecio of Tournefort and others, and many of the ſpecies of Jacobææ of the ſame authors.

Senecio foliis pinnatis, pinnis linearibus, apice inciſis, ſubtus incanis.
The pinnated-leaved Senecio, with linear pinnæ, divided at the extremities.

Perennial, groundſel-leaved Ragwort.

The root is oblong, tough, and fibrated: the plant riſes to three feet high: the ſtalk is robuſt, ſtriated, and ſimple: the leaves are divided into narrow ſegments, of a dark green colour on the upper ſurface, and hoary underneath: the flowers are large, yellow, and beautifully radiated; they ſtand in a kind of umbels, at the tops of the ſtalks.

It is common in paſtures. C. Bauhine calls it, Jacobæa ſenecionis folio perennis.

The other ſpecies are, of thoſe called Seneciones by authors, 1. The common Senecio, or Groundſel. 2. The ragwort-leaved, taller Senecio. 3. The tall, great-leaved, American Senecio. 4. The purple-flowered, American Senecio.

Of thoſe called Jacobææ are, 1. The common Ragwort, or Jacobæa. 2. The laciniated-leaved, ſmaller-flowered Jacobæa. 3. The broad-leaved, water Ragwort. 4. The roundiſh, ſerrated-leaved Jacobæa. 5. The round, undivided-leaved Jacobæa. 6. The oblong, ſerrated-leaved Jacobæa. 7. The long, ſerrated-leaved Jacobæa, called Saracens Confound. 8. The betony-leaved Jacobæa. 9. The tall, marſh Jacobæa, with ſerrated leaves. 10. The tall, limonium-leaved Jacobæa. 11. The woad-leaved Jacobæa. 12. The blue-green, chryſanthemum-leaved Jacobæa. 13. The large-flowered, finely divided-leaved Jacobæa. 14. The roſemary-leaved Jacobæa. 15. The multifid-leaved, umbellated Jacobæa. 16. The thick, groundſel-leaved, ſea Jacobæa. 17. The leſs jagged Jacobæa, with ſhort petals. 18. The hairy, viſcid, thick-leaved Jacobæa. 19. The woolly, narrow-leaved Jacobæa. 20. The white-leaved, ſea Jacobæa. 21. The wormwood-leaved Jacobæa. 22. The hawkweed-leaved Jacobæa, called hawkweed Doronicum. 23. The peach-leaved Jacobæa. 24. The ferulaceous-leaved, great-flowered Jacobæa. 25. The abrotanum-leaved Jacobæa. 26. The ſhrubby, abrotanum-leaved Jacobæa. 27. The clary-leaved Jacobæa. 28. The ſonchus-leaved Jacobæa. 29. The dandelion-leaved Jacobæa. 30. The undulated-leaved Jacobæa. 31. The purple-flowered, narrow-leaved, laciniated Jacobæa. 32. The tuberous-rooted, African Jacobæa. 33. The procumbent, hypericum-leaved Jacobæa. 34. The willow-leaved, American Senecio.

TUSSILAGO.

THE receptacle is naked: the down is ſimple: the ſquammæ of the cup are even, and are equal to the diſk in ſize.

This genus comprehends the Tuſſilago, Cacalia, and Petaſites of Tournefort and others.

1. *Tuſſilago ſcapo imbricato unifloro, foliis ſubcordatis.*
The imbricated-ſtalked, ſingle-flowered Tuſſilago, with ſubcordate leaves. **Common Colt's-foot.**

The root is ſlender, very long, creeping, and white: the leaves are of the breadth of a man's hand, ſometimes much larger, of a roundiſh figure, but cordated at the baſe, and angulated, and denticulated in ſeveral parts of the circumference; they ſtand on long, purpliſh pedicles, and are hoary underneath: the flowers appear very early in ſpring, before the leaves; the ſtalks which ſupport them are five or ſix inches high, hollow, tender, and imbricated with a kind of oblong ſquammæ, reſembling leaves; one flower ſtands at the top of each ſtalk, and is large and yellow.

It is common with us about watery places. C. Bauhine calls it, Tuſſilago vulgaris.

It is eſteemed a pectoral, and is frequently uſed in decoctions.

2. *Tuſſilago ſcapo imbricato thyrſifero, floſculis omnibus hermaphroditis.*
The imbricated-ſtalked, thyrſiferous Tuſſilago, with all the flowers hermaphrodite. **Butter-bur.**

This ſpecies agrees with the former, in the ſingularity of the flowers appearing early in the ſpring, before the leaves: the ſtalks on which theſe ſtand are eight or ten inches high, ſtriated, thick, tender, and furniſhed with a number of ſquammæ, reſembling leaves: the flowers are ſmall, and of a fleſh colour; they ſtand in cluſters, and form a kind of ſpike at the top: the leaves are two feet in diameter, roundiſh, and of a pale green colour: the root is large, creeping, and fibrated.

It is frequent in watery places. C. Bauhine calls it, Petaſites major et vulgaris.

The other ſpecies are, 1. The Tuſſilago, with ſhut flowers, called Anandria. 2. The ſmaller Petaſites, with white flowers. 3. The colt's-foot-leaved Petaſites. 4. The thick, angular-leaved Petaſites.

Of thoſe called Cacaliæ there are, 1. The woolly Cacalia. 2. The thick, hairy-leaved Cacalia. 3. The acute, thin, and ſmooth-leaved Cacalia. 4. The alliaria-leaved Cacalia. 5. The Cacalia, with leaves woolly on both ſides.

DORONICUM.

THE receptacle is naked; the down is ſimple; the ſquammæ of the cup are arranged in two orders, and are equal, and longer than the diſk.

This genus comprehends the Doronicum of Tournefort, the Bellidaſtrum of Micheli, and the Arnica of Ruppius.

Doronicum foliis ſubrotundis pubeſcentibus.
The roundiſh, hoary-leaved Doronicum. **Leopard's-bane.**

The root is oblong, white, creeping, and is jointed, and ſuppoſed to repreſent the figure of a ſcorpion: the radical leaves are roundiſh, two or three inches in diameter, ſoft to the touch, hairy, and of a pale green colour: the ſtalk riſes to eight or ten inches high; it is angulated and hairy: the flowers ſtand on the tops of the branches, and are moderately large, and yellow.

It is a native of Italy. C. Bauhine calls it, Doronicum radice ſcorpii; others, Doronicum latifolium, and vulgare.

The other ſpecies are, 1. The brachiated-rooted, ſcorpion Doronicum. 2. The plantain-leaved Doronicum. 3. The round, ſerrated-leaved Doronicum. 4. The hairy, plantain-leaved Doronicum. 5. The rough, long-leaved Doronicum. 6. The broad-leaved, great-flowered Doronicum. 7. The greateſt Doronicum, with amplexicaule leaves. 8. The black-rooted Doronicum. 9. The dandelion-leaved Doronicum. 10. The ſingle-flowered Doronicum.

GERBERA.

THE receptacle is naked; the down is capillary; the radii of the floſcules have filaments without antheræ annexed to them.

Of this genus there is but one known ſpecies: it is an Æthiopian; the leaves are pinnatifid, and the flowers yellow.

HELENIA.

THE receptacle is naked; the down has a little cup, with five indentings: the calyx of the flower is ſimple, and formed of a number of leaves.

This genus comprehends the Heleniaſtrum of Vaillant and others.

Helenia foliis decurrentibus. Baſtard
The decurrent-leaved Helenia. Elecampane.

The root is oblong and white: the plant riſes to two or three feet high: the ſtalk is rigid, erect, ſtriated, and alated, the leaves running down it from their baſes: the leaves ſtand very cloſe; they are oblong, narrow, of a pale green colour, and ſmooth: the flowers ſtand on the tops of the branches, and are large and yellow.

It is a native of North America. Vaillant calls it, Heleniaſtrum folio longiore et anguſtiore; others, Aſter luteus alatus, and Aſter floridanus aureus caule alato.

The other ſpecies are, 1. The broader-leaved Helenia. 2. The hairy, tall Helenia. 3. The ſmall-flowered Helenia.

TAGETES.

THE receptacle is naked; the down is ariſtated; the calyx is tubulous, and is formed of a ſingle leaf, divided into five ſegments at the end: the radii of the flowers are five.

1. *Tagetes caule ſubdiviſo diffuſo.* French
The diffuſe, ſubdivided-ſtalked Tagetes. Marygold.

The root is compoſed of a tuft of fibres: the ſtalk is ſtriated, ſlender, ramoſe, diffuſe, and two or three feet high: the leaves are large, oblong, pinnated, and of a dark green colour: the flowers ſtand on the extremities of the branches; they are moderately large, and yellow toward the center, but of a very dark colour elſewhere.

It is a native of Mexico, but is common in our gardens. C. Bauhine calls it, Tanacetum Africanum, ſive Flos Africanus minor; others, Tagetes minor.

There are ſeveral varieties of this ſpecies from culture, which are deſcribed by ſome authors as diſtinct ſpecies.

2. *Tagetes caule ſimplici erecto, pedunculis nudis uniſloris.* African
The ſimple, erect-ſtalked Tagetes, with flowers on long pedicles. Marygold.

The root is fibrous: the ſtalk is ſtriated, erect, hollow, and two or three feet high: the leaves are large, oblong, pinnated, and of a pale green colour: the flowers ſtand ſingly, on long, erect pedicles; they are large, and throughout of a pale yellow colour.

Culture makes many varieties in this ſpecies, as the double-flowered, &c. which many authors have deſcribed as ſo many ſpecies.

It is a native of Mexico. C. Bauhine calls it, Tanacetum Africanum majus ſimplici flore; Lobel, Othonna major polyanthos.

COTULA.

THE receptacle is naked; the down is emarginated; the corollulæ of the disk are divided into four segments at the extremity, and there are no corollulæ of the radius.

This genus comprehends the Ananthocyclus and Lancisia of Vaillant and Pontedera.

Cotula foliis lanceolato-linearibus pinnatifidis amplexicaulibus.
The Cotula, with lanceolato-linear, pinnatifid leaves surrounding the stalk.

The root is fibrous: the stalks are round and slender: the plant grows to six or eight inches high, the leaves are pinnatifid, oblong, and narrow, and somewhat resemble those of the coronopus: the flowers stand on the tops of the branches, and are small, naked, and whitish.

It is a native of Ethiopia, in wet places. Dillenius calls it, Ananthocyclus coronopi folio; Breynius, Chrysanthemum chamæmeli facie.

The other species are, 1. The Cotula, with inflated cups. 2. The broader-leaved Cotula. 3. The hairy Cotula.

BELLIS.

THE receptacle is naked; there is no down to the seeds; the cup is of a hemispheric shape, and equal; the seeds are obversely oval in figure; the receptacle is conic.

Bellis scapo nudo unifloro. **The little Daisy.**
The naked-stalked, single-flowered Bellis.

The roots are fibrated: the leaves are oblong and obtuse: the stalks naked and simple, and, at the summit of each, stands a moderately large flower, naturally whitish.

It is common every-where in our meadows. C. Bauhine calls it, Bellis minor vulgaris. The plant varies greatly in the height of it's stalk and size of it's leaves in it's wild state; and culture produces yet a greater number of variations in the colour and duplicature of the flower; all these have been described by authors as different species, and hence this single plant has been divided into near fifty.

CHRYSANTHEMUM.

THE receptacle is naked; there is no down to the seeds; the calyx is of a hemispheric figure, and imbricated, and the edges are membranaceous.

This genus comprehends the Chrysanthemum and Leucanthemum of Tournefort, and the Bellidoides of Vaillant.

Chrysanthemum foliis pinnatifidis incisis, extrorsum latioribus.
The pinnatifid and laciniated-leaved Chrysanthemum. **Cretic, corn Marygold.**

The root is fibrous: the plant rises to two feet high: the stalk is round, smooth, and firm: the leaves are finely divided into oblong and laciniated segments: the flowers stand at the tops of the branches, and are large, and of a beautiful yellow colour.

It is a native of Crete. C. Bauhine calls it, Chrysanthemum foliis matricariæ.

The other species are, 1. The bluish-green, laciniated-leaved Chrysanthemum. 2. The broad, roundish-leaved Chrysanthemum. 3. The lesser, oval-leaved Chrysanthemum. 4. The ageratum-leaved Chrysanthemum. 5. The narrow, dentated-leaved Chrysanthemum. 6. The dwarf, ranunculus-leaved Chrysanthemum. The varieties of the first described species are very numerous, and are described as distinct species by many.

Of the Leucanthemæ, or great Daisies, as they are usually called, there are, 1. The common Leucanthema. 2. The great, Alpine, rigid-leaved Leucanthema. 3. The great, acute-leaved Leucanthema. 4. The obtuse, crenated-leaved, mountain Leucanthema.

canthema. 5. The creeping-rooted, broad, ſerrated-leaved Leucanthema. 6. The tanzy-leaved Leucanthema. 7. The graſſy-leaved Leucanthema. 8. The coronopus-leaved Leucanthema. 9. The broad-leaved, great-flowered Leucanthema. 10. The deeply laciniated-leaved Leucanthema. 11. The hoary, multifid-leaved, little Leucanthema. 12. The ſilvery, laciniated-leaved Leucanthema. 13. The pinnatifid-leaved, acrid Leucanthema.

MATRICARIA.

THE receptacle is naked; there is no down to the ſeeds: the calyx is of a hemiſpheric figure, and imbricated, and the marginal ſquammæ are ſolid, not membranaceous.

Matricaria foliis compoſitis planis, foliolis ovatis inciſis. **Common Feverfew.**
The plane, compound-leaved Matricaria, with oval foliola.

The root is oblong, ſlender, and fibrated: the plant grows to two or three feet high; the ſtalk is round, hollow, and erect; the leaves are compoſed of a great number of ſhort, broad, and laciniated foliola: the flowers ſtand at the tops of the branches, and are moderately large and white, with a yellow diſk.

It is common in dry places. C. Bauhine calls it, Matricaria vulgaris. It has been eſteemed a good uterine, but is little uſed at preſent. Culture makes the flower double and fiſtulous: ſometimes alſo it is found naked; but theſe are varieties, not diſtinct ſpecies, as too many have made them.

The other ſpecies are, 1. The fine-leaved, ſcented Matricaria. 2. The great-flowered, tawny-leaved Matricaria. 3. The buphthalmum-leaved Matricaria. 4. The ſmall-flowered, ambroſia-leaved Matricaria.

ANTHEMIS.

THE receptacle is paleaceous; there is no down to the ſeeds: the cup is hemiſpheric and ſubequal: the receptacle is of a conic figure.
This genus comprehends the Chamæmelum of Tournefort and others.

Anthemis paleis ſetaceis, ſeminibus nudis. **Stinking Mayweed.**
The naked-ſeeded Anthemis, with ſetaceous paleæ.

The root is fibrous and white; the plant riſes to a foot and a half high: the ſtalk is round, green, and ſtriated: the leaves are finely divided into a multitude of oblong, narrow ſegments, and of a dark green: the flowers ſtand on the tops of the branches, and are very large, and of a beautiful white.

It is common in our corn-fields and gardens. C. Bauhine calls it, Chamæmelum fœtidum; others, Cotula fœtida.

The other ſpecies are, 1. The common, ſweet-ſcented Anthemis. 2. The Anthemis, without ſmell. 3. The tall, fine-leaved Athemis. 4. The ſea Chamomile. 5. The abrotanum-leaved, Alpine Anthemis. 6. The very fine-leaved, red-ſtalked Anthemis. 7. The very fine-leaved, large-flowered, ſcentleſs Anthemis. 8. The yarrow-leaved Anthemis. 9. The wormwood-leaved Anthemis. 10. The ſophia-leaved Anthemis.

ACHILLÆA.

THE receptacle is paleaceous; there is no down to the ſeeds: the calyx is of an oval figure, and imbricated: the receptacle is plane.
This genus comprehends the Millefolium and Ptarmica of Tournefort.

Achillæa foliis lanceolatis obtusis acute serratis. Maud-
The lanceolate, obtuse, and acutely serrated-leaved Achillæa. lin.

The root is oblong, ramose, creeping, woody, and fibrated: the plant grows to two feet, or more, in height: the stalk is round, erect, robust, and thick set with leaves from the bottom to the top; they are oblong, serrated, and blunt at the extremity: the flowers are small and yellow, and stand in clusters at the tops of the stalks, in a kind of umbels.

It is a native of France and Italy; we have it in our gardens. C. Bauhine calls it, Ageratum foliis serratis; others, Ageratum.

The other species of Achillæa are, 1. The common Yarrow. 2. The yellow-flowered, hoary-leaved Yarrow. 3. The broader-leaved Yarrow. 4. The little sweet Yarrow. 5. The common Ptarmica, with serrated leaves. 6. The dwarf, hoary, laciniated-leaved Ptarmica. 7. The shrubby, Santolina-leaved, Cretic Ptarmica. 8. The purple, tanzy-leaved Ptarmica, called purple, mountain Yarrow. 9. The long-clustered Ageratum. 10. The yarrow-leaved Ptarmica. 11. The matricaria-leaved Ptarmica. 12. The tall, yellow, Alpine Ptarmica. 13. The elecampane-leaved Ptarmica.

BUPHTHALMUM.

THE receptacle is paleaceous; the down of the seed is no other than an obsolete margin: the sides of the seeds, especially those of the radius, are emarginated. This genus comprehends the Asteriscus and Asteroides of Tournefort.

1. *Buphthalmum caulibus simplicissimis unifloris, foliis pinnato-multifidis.* Pellitory of
The single-flowered, pinnato-multifid-leaved Buphthalmum. Spain.

The root is oblong, thick, tough, and brown: the plant rises to five or six inches high: the leaves are divided into a multitude of fine, narrow, divaricated segments, and are of a deep green: the stalk is round and thick, usually purplish, sometimes green: the flower is large, reddish on the back-side, but white within; only one flower stands on each stalk.

It is a native of Syria. C. Bauhine calls it, Pyrethrum bellidis flore. It's root is the Pyrethrum of the shops.

2. *Buphthalmum foliis lanceolatis subdenticulatis glabris.* Willow-leaved
The smooth, lanceolated, subdenticulated-leaved Buphthalmum. After.

The root is oblong and white; the plant grows to two feet and a half high: the stalk is round, erect, and smooth; the leaves are very long, narrow, lanceolated, dentated at the edges, and of a bright green: the flowers stand on the tops of the branches, and are large and yellow.

It is a native of Germany. C. Bauhine calls it, After luteus angustifolius; others, After salicis folio glabro.

The other species are, 1. The tanzy-leaved Buphthalmum. 2. The annual Buphthalmum, with rigid leaves about the flower. 3. The taller, small-flowered Buphthalmum. 4. The dwarf, small flowered Buphthalmum. 5. The annual, patulous, sea Buphthalmum. 6. The perennial, patulous, maritime Buphthalmum. 7. The petasitis-leaved Buphthalmum.

ANACYCLUS.

THE receptacle is paleaceous; the down is emarginated: the ſides of the ſeeds are membranaceous.

This genus comprehends the Santolinoides of Vaillant and Micheli.

Anacyclus foliis pinnatifidis laciniatis.
The Anacyclus, with pinnatifid-laciniated leaves.

The root is oblong, white, and fibrated: the leaves are three inches long, and half an inch broad, and reſemble thoſe of the Coronopus: the ſtalks are numerous, and ſix or eight inches high; each has two or three little leaves on it, and at it's top ſupports a ſingle, globoſe, yellow flower.

It is a native of Italy. Barrilier calls it, Pyrethrum ceſpitoſa radice anthonidis flore; Micheli, Santolinoides Alpina.

The other ſpecies are, 1. The oriental, pinnated-leaved Anacyclus. 2. The ſmaller-flowered Anacyclus.

VERBESINA.

THE receptacle is paleaceous; the down is ariſtated: the calyx is compoſed of a double ſeries of ſquammæ: the floſcules of the radius are about five.

This genus comprehends the Eupatorio-phalacron, and Cerato-cephaloides of Vaillant.

Verbeſina foliis decurrentibus undatis obtuſis.
The undated, obtuſe, decurrent-leaved Verbeſina.

The root is fibrous: the plant riſes to two feet high: the ſtalk is round and robuſt, erect, ramoſe, and often purpliſh: the leaves are oblong, of a pale green, undulated at the edges, obtuſely pointed, and run down the ſtalk at their baſes, ſo as to give it an alated appearance: the flowers are large and yellow; they ſtand at the extremities of the branches.

It is a native of North America. Commelin calls it, Chryſanthemum Americanum alato caule.

The other ſpecies are, 1. The ſmaller-flowered Verbeſina. 2. The tall Verbeſina, with divided leaves. 3. The dwarf Verbeſina. 4. The many-flowered Verbeſina.

SIGESBECKIA.

THE receptacle is paleaceous; there is no down to the ſeeds: the involucrum conſiſts of five leaves, and is proper and patent: the radius is dimidiated.

Of this genus there is but one known ſpecies, which is ſufficiently diſtinguiſhed by theſe characters. It's leaves are turned back always at night; the cups of the flowers are hairy.

TETRAGONOTHECA.

THE receptacle is paleaceous; there is no down to the ſeeds: the calyx conſiſts of a ſingle leaf, and is plane, and divided into four parts.

Theſe characters ſufficiently diſtinguiſh the Tetragonotheca from all the other plants of this claſs, without a farther deſcription.

TRIDAX.

THE receptacle is paleaceous; the down of the ſeeds is ſimple: the calyx is of a cylindric figure, and imbricated ſtructure: the radii of the corolla are tripartite.

Theſe characters ſufficiently diſtinguiſh the Tridax, without a farther deſcription.

Claſs

Class the Nineteenth. Order the Third.

SYNGENESIA POLYGAMIA FRUSTRANEA.

Syngenesia, which have the flowers of the disk hermaphrodite, furnished with a stigma, and producing seeds; and the flowers composing the radius without stigmata, and consequently incapable of producing seeds.

HELIANTHUS.

THE receptacle is paleaceous and plane: the pappus of the seeds is composed of two leaves: the calyx is imbricated.
This genus comprehends the Corona solis of Tournefort.

Helianthus radice annua. **The great Sun-flower.**
The annual-rooted Helianthus.

The root is oblong, white, tender, and fibrated: the plant rises to six feet, or more, in height: the stalk is round, robust, thick, green, and hairy: the leaves are very large, broad at the base, serrated, and terminate in a point: the flowers are yellow, and often more than a foot in diameter.

It is a native of Mexico, but is common in our gardens. C. Bauhine calls it, Helenium Indicum maximum; others, Corona solis, and Herba maxima.

The other species are, 1. The smaller-flowered, ramose, perennial Helianthus. 2. The tuberous-rooted Helianthus, called Jerusalem Artichoak. 3. The great, flowered, perennial Helianthus. 4. The long-rooted, small-flowered Helianthus. 5. The broad-leaved, tall Helianthus. 6. The tall, alated-stalked Helianthus. 7. The tall, strumous-rooted Helianthus. 8. The great-leaved, small-flowered Helianthus. 9. The trachelium-leaved, creeping-rooted Helianthus. 10. The tall, Virga aurea-leaved Helianthus. 11. The pale, yellow-flowered, creeping-rooted Helianthus. 12. The willow-leaved Helianthus, with alated stalks. 13. The shrubby, lychnis-leaved Helianthus. 14. The laureola-leaved, shrubby Helianthus. 15. The tricuspidated-leaved Helianthus. 16. The Helianthus, with deeply divided leaves. 17. The narrow, laciniated-leaved Helianthus. 18. The great, trifid-leaved Helianthus.

RUDBECKIA.

THE receptacle is paleaceous and conic: the pappus is divided by four indentings: the calyx has two series of squammæ.
This genus comprehends the Obeliscotheca of Dillenius and Vaillant.

Rudbeckia foliis inferioribus trilobis superioribus indivisis.
The Rudbeckia, with the lower leaves trilobous, the upper undivided.

The root is biennial; the plant grows to two feet high: the stalk is round, rigid, hairy, and very full of branches: the leaves are scabrous, and serrated: the lower ones are divided into three segments each; the others are simple, of a lanceolated figure, and have no pedicles: the flowers stand at the extremities of the branches; they are large and yellow, the disk somewhat browniſh.

It is a native of Virginia. Vaillant calls it, Obeliscotheca trifido folio.

The other species are, 1. The compositе, laciniated-leaved Rudbeckia. 2. The oblong, hairy-leaved Rudbeckia. 3. The great, scabrous Rudbeckia. 4. The broad-leaved, many-flowered Rudbeckia. 5. The tall, red-stalked Rudbeckia. 6. The small, short-leaved Rudbeckia. 7. The great-flowered, hairy Rudbeckia.

COREOPSIS.

THE receptacle is paleaceous and conic; the pappus is bicornate: the calyx is erect, and formed of ſeveral leaves, and ſurrounded with patent radii at the baſe.

Coreopſis folis ternatis.
The ternate-leaved Coreopſis.

The root is oblong, fibrated, and perennial: the plant grows to five feet high: the ſtalk is rigid, firm, round, ſmooth, and jointed: the leaves ſtand three on a pedicle; they are moderately large, ſmooth, of a deep green, and of a firm texture: the flowers are large and yellow, and ſtand at the extremities of the branches.

It is a native of Virginia. Van Royen calls it, Rudbeckia foliis compoſitis integris.

The other ſpecies are, 1. The ſerrated-leaved Coreopſis. 2. The broad-leaved, hairy Coreopſis. 3. The ſmooth, dwarf Coreopſis.

CENTAUREA.

THE receptacle is ſetoſe: the corollulæ of the radius are infundibuliform, long, and irregular.

This genus comprehends the Centaureum majus, Jacea, and Cyanus of Tournefort; and the Calcitrapa, Calcitrapoides, Rhaponticum, Rhaponticoides, Jacea, Amberboi, Cyanus, and Crocodilium of Vaillant.

Vaillant's diſtinctions of theſe ſeveral genera, as he calls them, are theſe: The Calcitrapa has the calyx armed with ſingle ſpines, which are large and erect; and the ſeeds are either naked or coronated. In the Calcitrapoides, the calyx has ſmall cluſtered ſpines. In the Rhaponticum, the calyx is formed of lax, undivided membranes. In the Rhaponticoides, it is formed of lanceolated and acuminated ſquammæ. In the Amberboi, the ſquammæ of the calyx are obtuſe and ſimple. In the Jacea, the ſquammæ of the calyx are ciliated. In the Cyanus alſo, the ſquammæ are ciliated, but ſhorter; and, in the Crocodilium, the ſquammæ of the calyx are aculeated, and the ſeed is downy and plumoſe.

Centaurea calycibus ciliatis, ciliis ſetaceis reflexis.
The Centaurea, with ciliated calyces; the ciliæ ſetaceous and reflex.

The root is fibrous; the plant riſes to two feet and a half high: the ſtalks are ſtriated, angular, hairy, and ramoſe: the leaves are large, oblong, broad, and whitiſh, an inch and a half long, and half an inch broad: the flowers are large and purple: the heads uſually ſtand three together, and are ſurrounded with a beautiful reticulation, formed of the ciliæ, or hairs of the ſquammæ of the cup.

It is a native of Germany. C. Bauhine calls it, Jacea latifolia capite hirſuto.

The other ſpecies are: Of the Jacea kind, 1. The common, black Jacea. 2. The jagged-leaved Jacea. 3. The narrow-leaved Jacea. 4. The dwarf, undivided-leaved Jacea. 5. The great, ſquammoſe-headed Jacea. 6. The narrow-leaved, hairy-headed Jacea. 7. The larger, ſcabious-like, laciniated-leaved Jacea. 8. The Cretic, ſquammated Jacea. 9. The hoary, hiſpid-headed Jacea. 10. The white, ſtœbe-leaved Jacea. 11. The tall, ſuccory-leaved Jacea. 12. The hairy, rocket-leaved Jacea. 13. The jagged-leaved, ſilvery-cupped Jacea. 14. The great, undivided-leaved, ſilvery-cupped Jacea, or Stœbe. 15. The ſmaller Stœbe. 16. The purple, ſerrated-leaved Jacea. 17. The blue, calcitrapa-leaved Jacea. 18. The evergreen, Portugal Jacea. 19. The cerinthe-leaved Jacea. 20. The broad-leaved, Spaniſh Jacea, with hairy fibres. 21. The white, woolly Jacea. 22. The ſtyrax-leaved, tree Jacea. 23. The prickly, hoary, Cretic Jacea. 24. The undulated-leaved, woolly Jacea. 25. The linaria-leaved Jacea. 26. The roſemary-leaved Jacea. 27. The long, narrow, and hoary-leaved, Cretic Jacea.

Of thoſe called Cyani are, 1. The common, great Cyanus. 2. The long-leaved Cyanus. 3. The pinnated-headed Cyanus. 4. The great, ſweet, oriental Cyanus.

5. The oblong-headed Cyanus. 6. The fiſtulous-flowered, oriental Cyanus. 7. The exotic Cyanus, called Amberboi. 8. The hierachium-leaved Cyanus. 9. The long-leaved, ſhrub Cyanus. 10. The common, blue-corn Cyanus. The varieties of this laſt ſpecies are very numerous; authors make near twenty ſpecies of them.

Of thoſe called Centaureum there are, 1. The common, laciniated-leaved Centaureum. 2. The undivided-leaved Centaureum. 3. The artichoke-leaved Centaureum. 4. The yellow, Alpine Centaureum. 5. The jagged-leaved, African Centaureum. 6. The hoary, elecampane-leaved Centaureum. 7. The narrow-leaved, great Centaureum; theſe two laſt are called Rhapontics. 8. The low, hoary Centaureum. 9. The great, mullein-leaved, ſhort-ſtalked Centaureum. 10. The laciniated, woolly-leaved Centaureum. 11. The coronopus-leaved Centaureum.

Claſs the Nineteenth. Order the Fourth.

SYNGENESIA POLYGAMIA NECESSARIA.

Syngeneſia, in which the flowers of the diſk are hermaphrodites but want the ſtigma, and therefore produce no ſeeds; and the flowers of the radius are female, and produce ſeeds.

SILPHIUM.

THE receptacle is paleaceous; the pappus of the ſeeds is emarginated or bicornate: the calyx is imbricated and ſquammoſe.

This genus comprehends the Aſteriſcus of Dillenius. The characters ſufficiently diſtinguiſh it, without a farther deſcription.

CHRYSOGONUM.

THE receptacle is paleaceous; the pappus of the ſeeds is compoſed of a ſingle leaf, and is tridentated: the calyx conſiſts of five leaves; the ſeeds are incloſed in a little cup, formed of four leaves.

Theſe characters ſufficiently diſtinguiſh the Chryſogonum, without a farther deſcription.

MELAMPODIUM.

THE receptacle is paleaceous; the pappus of the ſeeds is compoſed of a ſingle leaf, hollowed with an oblong furrow: the calyx conſiſts of five leaves; the receptacle is conic.

Theſe characters ſufficiently diſtinguiſh the Melampodium.

MICROPUS.

THE receptacle is paleaceous: there is no pappus to the ſeeds: the calyx is calyculated; and the corolla is of the naked kind, or has no radius.

This genus comprehends the Gnaphalodes of Tournefort. Of this genus there is but one known ſpecies.

MICROPUS.

The root is oblong, ſlender, white, and tough: the plant is procumbent, and the ſtalks round, white, and woolly: the leaves are oblong, ſoft to the touch, and of a whitiſh colour: the flowers are ſmall, and ſtand at the extremities of the branches.

It is a native of the ſea-coaſts of Portugal. Tournefort and others call it, Gnaphalodes Luſitanica.

ERIOCEPHALUS.

THE receptacle is somewhat hairy; there is no down to the seeds: the calyx is composed of ten equal leaves: the radii of the flower are five.

These characters sufficiently distinguish the Eriocaphalus, without a farther description.

ARCTOTIS.

THE receptacle is setose; the pappus is of an ovated figure: the calyx is imbricated, and the squammæ it is composed of are lax and glossy at the base.

This genus comprehends the Arctotheca of Vaillant, and the Anemonospermos of Commelin.

Arctotis foliis pinnatifido-laciniatis.
The Arctotis, with pinnatifido-laciniated leaves.

The root is fibrous and white: the plant grows to two feet high; the stalk is round, striated, and weak; the leaves are three inches long, an inch, or more, in breadth, deeply divided into segments to the middle rib, and those segments laciniated: the flowers stand at the extremities of the branches; they are large, and of a flesh colour.

It is a native of Africa. Commelin calls it, Anemonospermos Jacobææ folio.

The other species are, 1. The large-leaved Arctotis. 2. The procumbent, divided-leaved Arctotis. 3. The great-flowered, laciniated-leaved Arctotis. 4. The rigid-stalked, smaller-flowered Arctotis.

OSTEOSPERMUM.

THE receptacle is naked; there is no pappus to the seeds: the calyx is composed of many leaves: the seeds are globose, coloured, and of a bony hardness.

This genus comprehends the Chrysanthemoides of Tournefort, and the Monilifera of Vaillant. These characters sufficiently distinguish it, without a farther description.

CALENDULA.

THE receptacle is naked; there is no pappus to the seeds: the calyx is composed of numerous leaves, and is equal: the seeds of the disk are membranaceous.

This genus comprehends the Caltha of Tournefort, and the Demorphotheca of Vaillant.

Calendula foliis ovatis obtusis dentatis.
The oval, obtuse-leaved Calendula.

The root is white and fibrous: the plant is procumbent or oblique, very rarely quite erect: the stalk is round and striated, of a pale green, and tender: the leaves are oblong, broad, dentated, and obtuse: the flowers stand on the tops of the branches; they are moderately large, and are of a violet colour on the outside, and white within.

It is a native of Africa. Tournefort calls it, Caltha Africana flore intus albo.

The other species are, 1. The common garden Marygold. 2. The larger, many-flowered Calendula. 3. The dwarf, field Calendula. 4. The woolly, Portugal Calendula. 5. The little-flowered, erect, African Calendula.

OTHONNA.

THE receptacle is naked: the pappus of the seeds is plumose: the calyx is of a subcylindric figure, and is composed of one leaf, divided into many segments.

This genus comprehends the Jacobæastrum of Vaillant.

Othonna foliis subcordatis, caule subnudo simplicissimo.
The subcordated-leaved Othonna, with a simple, almost naked stalk.

The root is large, tuberous, and yellowish: the radical leaves are numerous, large, roundish, but somewhat cordated and angulated, and have pedicles a foot long: the stalk is round, thick, hoary, and three feet high: the leaves on it are few; they are roundish and sinuated a little: the flowers are large and yellow; they stand in a kind of spike at the top of the stalk.

It is a native of Russia. Amman calls it, Jacobæastrum cacaliæ folio.

The common, hoary, sea Jacobæ, has some right to be of this genus. It's calyx is indeed composed of several leaves, but it is not calyculated at the base, as in the Jacobææ.

SPHÆRANTHUS.

THE receptacle is naked: there is no pappus to the seeds: the calyx is imbricated, and contains several calyculi, each composed of five leaves, and containing a single flower.

These characters sufficiently distinguish the Sphæranthus, without a farther description.

MILLERIA.

THERE is scarce any visible receptacle; the seeds have no pappus: the calyx is composed of three valves: the radius of the corolla is dimidiated.

These characters sufficiently distinguish the Milleria, without a farther description.

Class the Nineteenth. Order the Fifth.

SYNGENESIA POLYGAMIA MONOGAMIA.

CORYMBIUM.

THE calyx is of a prismatic form; it is composed of two leaves, and contains a single flower: the corolla of the floscule is of an infundibuliform shape, and divided into five segments at the edge: the seed is single, and is placed under the receptacle.

It is a North American, and is sufficiently distinguished by these characters, without a farther description.

JASIONE.

THE common calyx is formed of ten leaves: the corolla is regular, and consists of five petals: the fruit is a capsule placed under the corolla, and contains two cells.

These characters sufficiently distinguish the Jasione, without a farther description.

LOBELIA.

THE calyx is divided into five segments: the corolla is irregular, and consists of a single petal: the fruit is a capsule placed under the flower, and contains three cells.

This genus comprehends the Dortmanna of Rudbeck, the Laurentia of Micheli, the Rapuntium of Tournefort, and the Flos Cardinalis of Rivinus.

Lobelia

18

19

Hypericum. 13

Othonna

Chrysanthemum

Chondrilla

Tragopogon

Echinopus

Buphthalmum

Hierachium

Gundelia

Xeranthemum

Anacyclus

Citrus

Leontodon

Bidens

Doronicum

Jacetos

Theobroma

Cantananche

B. Cole sculp.

Lobelia caule erecto, foliis lanceolatis ſerratis, ſpica terminali.
The erect Lobelia, with lanceolated, ſerrated leaves, and a terminatory ſpike.

The root is white, creeping, fibrated, and full of a milky juice: the plant riſes to two feet high: the ſtalk is round, ſtriated, and of a pale green colour: the leaves are oblong, ſmooth, ſerrated, and of a duſky green colour: the flowers are large, and of a beautiful ſcarlet; they ſtand in a ſpike, half the length of the ſtalk.

It is a native of Virginia. Moriſon calls it, Rapuntium galeatum Virginianum coccineo flore majore; Ruppius, Cardinalis Rivini.

The other ſpecies of Lobelia are, 1. The oval-leaved Lobelia, with inflated cups. 2. The great, blue, long-ſpiked Lobelia. 3. The ſmall-flowered, virga aurea-leaved Lobelia. 4. The tall, cirſium-leaved, green-flowered Lobelia. 5. The purple, trachelium-leaved Lobelia. 6. The ſmall, acrid, violet-coloured-flowered Lobelia. 7. The narrow-leaved, African Lobelia. 8. The pinaſter-leaved, Ethiopian Lobelia. 9. The coronopus-leaved Lobelia. 10. The linaria-leaved Lobelia.

VIOLA.

THE calyx is compoſed of five leaves; the corolla is compoſed of five petals, and is irregular, and corniculated behind: the fruit is a capſule within; the flower formed of three valves.

Viola ſtolonibus teretibus reptantibus, foliis ſubrotundis. **The yellow, marſh Violet.**
The round-leaved, creeping Viola.

The root is fibrous, and ſends out ſeveral oblong, round, tender, creeping ſtalks: from theſe, at certain diſtances, grow tufts of leaves; they are ſmall, round, and crenated at the edges, and ſtand on moderately long pedicles: among theſe riſe other pedicles, of an inch or two in length, on the ſummit of each of which ſtands a ſmall, yellow flower, like the common blue Violet in ſhape.

It is a native of our marſhes in the north of England. C. Bauhine calls it, Viola Alpina rotundifolia lutea.

The other ſpecies of Violet are, 1. The common, ſpring Violet, with blue or white flowers. 2. The oblong-leaved, blue Violet. 3. The trachelium-leaved Violet. 4. The round-leaved, ſmooth, blue, marſh Violet. 5. The laciniated-leaved Violet. 6. The little, thick-leaved Violet. 7. The ſmall, narrow-leaved, white-flowered Violet. 8. The erect Violet, called Viola arboreſcens. 9. The yellow, arboreſcent Violet. 10. The three-coloured, ſweet Violet. 11. The three-coloured, narrow-leaved Violet. 12. The great, yellow-flowered Violet. 13. The roundiſh-leaved, great, yellow-flowered Violet. 14. The great-flowered, blue, mountain Violet. 15. The common Panſy, or garden, three-coloured Violet. 16. The two-coloured, weak-ſtalked, field Violet. 17. The long-leaved, ſhrubby, Spaniſh Violet. 18. The granadilla-leaved Violet. 19. The teucrium-leaved, long-ſpurred Violet. 20. The crenated, baſil-leaved Violet. 21. The nummularia-leaved, little, Alpine Violet. 22. The common, upright, long-leaved, American Violet. 23. The upright, cucumber-leaved, Virginian Violet.

IMPATIENS.

THE calyx is compoſed of two leaves; the corolla is irregular, and is compoſed of five petals; the nectarium is cucullated; the fruit is a capſule within the flower, formed of five valves.

This genus comprehends the Balſamina of Tournefort.

Impatiens pedunculis uniflоris aggregatis, foliis lanceolatis, nectariis flore brevioribus. **Balſam.**

The aggregate, peduncuſed Impatiens, with lanceolated leaves.

The root is compoſed of a tuft of fibres: the plant riſes to two feet high: the ſtalk is round, hollow, tender, ſucculent, and remarkably thick: the leaves are three inches long, and an inch broad, ſerrated, and of a pale green colour: the flowers ſtand on ſlender, drooping pedicles, ariſing from the alæ of the leaves; they are numerous and large, of a pale red, or whitiſh, colour: the fruit is a large, rough, pointed capſule, which, on the leaſt touch, when ripe, burſts, and throws out it's ſeed to a great diſtance.

It is a native of Ceylon, but is frequent in our gardens. C. Bauhine calls it, Balſamina fœmina. It's flowers are very different in colour, variegation, and ſize; and hence authors have made ſeveral ſpecies from this one.

The other really diſtinct ſpecies of the Impatiens are, 1. The ſmall-flowered, narrow, crenated-leaved Impatiens. 2. The narrow, undivided-leaved, ſmall-flowered Impatiens. 3. The yellow-flowered Impatiens, called podded Arſmart, and Noli-me-tangere. 4. The broader-leaved, purple-flowered Impatiens. 5. The great, narrow-leaved, Virginian Impatiens, with variegated red and yellow flowers.

Claſs the Twentieth.

GYNANDRIA.

Plants whoſe ſtamina are placed either on the ſtyle, or on the receptacle, which is elongated into the form of a ſtyle, and carries on it both the piſtil and ſtamina.

OF the ſeveral genera of this claſs ſome have two ſtamina to each flower, ſome have three, ſome four, ſome five, ſome ſix, ſome ten, ſome an indeterminate larger number. They may hence, therefore, be naturally arranged into ſeveral diſtinct orders.

Claſs the Twentieth. Order the Firſt.

GYNANDRIA DIANDRIA.

Plants which have two ſtamina growing on the ſtyle.

ORCHIS.

THE nectarium of the corolla is of a corniculated form, and is ſituated at the hinder part of the flower.

Orchis bulbis indiviſis, nectarii labio quadrifido crenulato, cornu obtuſo. **Fool's-ſtones.**

The undivided, bulbed Orchis, with the lip of the nectarium crenulated and quadrifid.

The root is compoſed of two oblong, roundiſh bulbs, connected together; they are whitiſh, full of a mucilaginous juice, and fibrated: the leaves are ſix inches long, and two broad, narrow at the baſe, and terminated by an obtuſe point, of a deep green colour, and often ſpotted with black: the ſtalk is round, ſucculent, and a foot high: it has two or three leaves like the radical ones, but ſmaller, and, at it's top, ſtands a ſpike, of two inches long, of purple flowers, moderately large, and beautiful.

It is common in our meadows. C. Bauhine calls it, Orchis morio mas.

This

This ſpecies varies extreamly in the ſize and colour of the flower, in it's height, and in the variegations of the leaves: authors have hence made no leſs than fourteen ſpecies of it, under the names of Orchis morio procerior majore flore, Orchis morio fœmina parva, Orchis morio fœmina vulgaris, Orchis ſerotina anguſto folio, flore niveo, roſeo, carneo, variegato, &c.

The other really diſtinct ſpecies of Orchis are, 1. The open-flowered, or great, military Orchis. 2. The low, military Orchis. 3. The green-flowered, ſtrong-ſmelling Orchis. 4. The white-flowered, bifoliate Orchis. 5. The conglomerated, ſpiked, mountain Orchis. 6. The broad-leaved, palmated Orchis, with long ſpurs. 7. The Orchis, with faſciculated, filiform roots, called purple Bird's-neſt. 8. The broad-leaved, compact-ſpiked Orchis. 9. The ſweet, purple, mountain Orchis. 10. The globoſe-flowered Orchis. 11. The graſſy-leaved Orchis. 12. The man Orchis. 13. The ſmaller-flowered, man Orchis. 14. The ſmall, purple, ſtinking Orchis. 15. The trifoliate, purple Orchis. 16. The fly Orchis. 17. The variegated, larger-flowered, fly Orchis. 18. The ſmall, yellow-flowered, fly Orchis. 19. The broad-leaved, butterfly Orchis. 20. The narrow-leaved, butterfly Orchis. 21. The ſpider Orchis. 22. The long-tongued, Italian Orchis. 23. The common, palmated, pale-flowered Orchis. 24. The tall, galericulate, palmated Orchis. 25. The narrow-leaved, ſweet-ſcented, palmated Orchis. 26. The white, palmated, ſtrong-ſcented Orchis. 27. The black-flowered, narrow-leaved, palmated Orchis.

SATYRIUM.

THE nectarium is of the form of a ſcrotum, or inflated and didymous, and is ſituated behind the flower.

Satyrium bulbis indiviſis, nectarii labio trifido, foliis lanceolatis.
The undivided-bulbed Satyrium, with lanceolated leaves, and with the lip of the nectarium trifid. Goat-ſtones.

The root is compoſed of two large bulbs, each of the ſize of a walnut: the leaves are large, oblong, broad, and obtuſely pointed: the ſtalk grows to three feet high; it is ſucculent, tender, and ſtriated: the flowers are numerous, and form a ſpike at the top; they are variegated with green, purple, and white, and have an extremely long beard hanging from each of them.

It is a native of England, but is very rare. C. Bauhine calls it, Orchis barbata odore hirci breviore latioreque folio; others, Trago-orchis.

The other ſpecies are, 1. The palmated Batrachite, or Frog Orchis. 2. The broader-leaved, ſmall-flowered Satyrium. 3. The duſky-coloured-flowered Satyrium.

SERAPIAS.

THE nectarium is oval and gibbous, and the labium is of an oval figure.
This genus includes the Helleborine of Tournefort.

Serapias bulbis fibroſis, nectarii labio obtuſo petalis breviore.
The fibrous-bulbed Serapias, with the lip of the nectarium ſhorter than the petals. Broad-leaved, baſtard Hellebore.

The root is compoſed of compact cluſters of fibres: the leaves are oblong, broad, obtuſely pointed, and nervous: the ſtalk riſes to a foot and a half, or more, in height, and is ſimple, round, and hoary; the leaves on it are like the radical ones, and have no pedicles; they are three inches long, and two broad: the flowers are ſmall, and of a green and purple colour; they form a kind of lax ſpike, reaching from the middle to the top of the ſtalk.

It is not uncommon with us in woods. C. Bauhine calls it, Helleborine latifolia montana.

The other ſpecies are, 1. The ſmaller-flowered, broad-leaved Serapias. 2. The long and narrow-leaved, purple-flowered Serapias. 3. The long-leaved, marſh Serapias.

pias. 4. The large, green-flowered, long-leaved Serapias. 5. The ſmaller, ſhort-leaved Serapias.

HERMINIUM.

THE nectarium is hollowed and carinated, and it's lip is trifid or bifid.
This genus comprehends the Monorchis of Micheli.

Herminium bulbo ſupra radicato, caule folioſo. Musk Orchis.
The leafy-ſtalked Herminium, with fibres above the bulb.

The root is a ſingle bulb, of the bigneſs of a nut: the plant riſes to eight inches high: the ſtalk is round, ſlender, and green: the leaves are an inch and a half long, and half an inch broad: the flowers are ſmall and yellowiſh, and have a very ſweet ſcent; they ſtand in form of a ſlender ſpike, at the top of the ſtalk.

It is a native of moſt parts of Europe, but is no where very frequent. Authors call it, Orchis odorata moſchata, ſive Monorchis.

The other ſpecies are, 1. The trifoliate, naked-ſtalked Herminium. 2. The larger-flowered Herminium.

NEOTIA.

THE lip of the nectarium is pendent, and uſually undivided, and has a denticulation on each ſide.
This genus comprehends the Nidus avis of Tournefort, and the Corallorhiza of Ruppius.

Neotia bulbis faſciculatis, nectarii labio bifido. Bird's-neſt.
The faſciculated-bulbed Neotia, with the lip of the nectarium bifid.

The root is compoſed of compact bundles of fibres: the plant riſes to a foot, or more, in height: the ſtalk is whitiſh, round, and ſucculent: the leaves are numerous, ſhort, membranaceous, thin, ſtriated, obtuſe, and uſually ſomewhat emarginated, or cordated, at the top: the flowers are of a duſky colour, and moderately large; they ſtand in form of a thick, ſhort ſpike, at the tops of the ſtalk, and in ſhape and ſize reſemble thoſe of the orchis's.

It is a native of our woods, but is not common. C. Bauhine calls it, Orchis abortiva fuſca: when decaying, it is throughout of a duſky brown colour.

The other ſpecies are, 1. The double-bulbed Neotia, or female Monorchis of C. Bauhine. 2. The Triorchis of authors, or triple Ladies Traces.

OPHRYS.

THE nectarium is a dependent lip, bifid, and marked with a denticulation on each ſide.

Ophrys foliis ovatis. Common Twyblade.
The ovated-leaved Ophrys.

The root is compoſed of a multitude of thick, compact fibres: the plant riſes to ten inches, or more, in height: the ſtalk is round, thick, ſucculent, and green: at about three inches from the ground it has two leaves, placed oppoſite; they are three inches long, two inches broad, obtuſe, nervous, and of a pale green colour; the ſtalk is every-where elſe naked, and, at it's top, ſtand a number of ſmall, greeniſh flowers, like thoſe of the orchis's, forming a kind of ſpike.

It is common in wet places. C. Bauhine calls it, Ophris bifolia; others, Bifolium vulgare: there are ſometimes three leaves inſtead of two, but very rarely.

The other ſpecies are, 1. The bulbous-rooted Ophrys. 2. The creeping-rooted, marſh Ophrys. 3. The leaſt, or triangular-leaved Ophrys.

LIMODORUM.

THE nectarium is hollow, and formed of a ſingle leaf; it is ſupported on a pedicle, and is ſituated within the lower petal of the corolla.

Theſe characters ſufficiently diſtinguiſh the Limodorum of Linnæus, without a farther deſcription; the Limodorum Auſtriacum of Cluſius and others is not of this genus, but is an orchis, mentioned in it's place under that genus.

CYPRIPEDIUM.

THE nectarium is ventricoſe, inflated, and hollow.

This genus comprehends the Calceolus of Tournefort, and the Calceolus Mariæ of others.

Cypripedium foliis latioribus. Ladies Slipper.
The broad-leaved Cypripedium.

The root is oblong, oblique, divaricated, and fibrated: the plant riſes to a foot, or more, in height: the leaves are large, broad, obtuſe, and ſomewhat hairy: the flower is purpliſh, large, and ſtands on a long pedicle: from it's center grows the part which is called the Slipper; this is of the bigneſs of a pigeon's egg, thin, membranaceous, and inflated, and it's colour is yellowiſh.

It is a native of the north of England. C. Bauhine calls it, Helleborine flore rotundo, ſive Calceolus; others, Calceolus Mariæ.

The other ſpecies are, 1. The narrower-leaved, large-flowered Cypripedium. 2. The American, tall Cypripedium. 3. The ſmaller, yellow-flowered Cypripedium. 4. The ſmooth, broad-leaved Cypripedium. 5. The double bulbous-rooted Cypripedium, called the Bee Orchis. 6. The ſmaller-flowered, double, bulb-rooted Cypripedium.

EPIDENDRUM.

THE nectarium is turbinated, oblique, and reflex.

This genus comprehends the Augureek of Kœmpfer, and the Vanilla of Plumier, 28.

Epidendrum fructu nigreſcente inodoro. Baſtard Vanilla.
The Epidendrum, with a blackiſh, ſcentleſs fruit.

The root is divaricated and creeping: the plant climbs up the trees that are neareſt it, and uſually exceeds them in height: the leaves are ten inches long, lanceolated, and four inches broad: the ſtem is firm, jointed, and of the thickneſs of a man's finger: the flowers ſtand in a kind of ſpikes; they are large, green on the outſide, and white within: the fruit is a long, black pod.

It is a native of St Domingo. Plumier calls it, Vanilla flore viridi et albo.

The other ſpecies are, 1. The ſhort-leaved Epidendrum. 2. The black-flowered, ſweet-podded Epidendrum, or common Vanilla.

Claſs the Twentieth. Order the Second.

GYNANDRIA TRIANDRIA.

Plants which have three ſtamina growing on the ſtyle.

SISYRINCHIUM.

THE Siſyrinchium has but a ſingle ſtigma: the ſpatha is compoſed of two leaves: the corolla conſiſts of ſix petals: the capſule has three cells, and is ſituate under the corolla.

This genus comprehends the Bermudiana of Tournefort.

Siſyrinchium caule et foliis ancipitibus.
The Siſyrinchium, with edged ſtalks and leaves.

The root is fibrated and creeping: the leaves are long, narrow, graſſy, of a deep green colour, and edged both ways: the ſtalk is of the ſame ſhape with the leaves, and edged in the ſame manner, like a ſword: the flowers are ſmall and blue.

It is a native of Virginia. Dillenius calls it, Bermudiana graminea flore minore.

Claſs the Twentieth. Order the Third.

GYNANDRIA TETRANDRIA.

Plants which have four ſtamina growing upon the ſtyle.

NEPENTHES.

THE ſtigma is ſingle; the calyx is divided into four parts; there is no corolla; the fruit is a capſule, containing four cells.

Theſe characters ſufficiently diſtinguiſh the Nepenthes from all the other genera of this claſs, without a farther deſcription.

Claſs the Twentieth. Order the Fourth.

GYNANDRIA PENTANDRIA.

Plants which have four ſtamina growing upon the ſtyle.

PASSIFLORA.

THE ſtyles carrying the ſtigmata are three: the calyx is formed of five leaves: the corolla conſiſts of five petals: the nectarium is a corona, ſurrounding the ſtyle within the petals: the fruit is a berry, ſupported on a pedicle.

This genus comprehends the Granadilla, Murucuia, and Clematis of authors.

Paſſiflora foliis integerrimis ovato lanceolatis. **Long-leaved**
The Paſſiflora, with undivided, oval leaves. **Paſſion-flower.**

The root is brachiated and ſpreading: the ſtem is ſlender, tough, woody, and brown: the leaves ſtand alternately, at ſix inches diſtance; they are three or four inches long, half as much in breadth, and pointed at the end; they are ſoft to the touch, and of a fine bright green: the tendrils are numerous, long, and of a bright green: the flowers ſtand ſingly on long pedicles, ariſing from the alæ of the leaves; they are of a mixt white, purple, and blue colour, in the ſeveral parts, and are two inches in diameter, and very beautiful.

It is a native of America. Plumier calls it, Clematitis Indica flore clavato, foliis oblongis, fructu citriformi: we have it in our ſtoves.

The other ſpecies are, 1. The common Paſſion-flower. 2. The tricuſpidate-leaved, blackiſh-flowered Paſſion-flower. 3. The tricuſpidate-leaved Paſſion-flower, with ſmall, yellow flowers. 4. The large, tricuſpidate-leaved Paſſion-flower, with olive-ſhaped fruits. 5. The olive-fruited, narrower, tricuſpidate-leaved Paſſion-flower. 6. The narrow, tricuſpidate-leaved Paſſion-flower, with little, green flowers. 7. The little-flowered, ivy-leaved Paſſion-flower. 8. The ſtinking, tricuſpidate, hairy-leaved, white-flowered Paſſion-flower. 9. The oval-fruited, many-leaved Paſſion-flower. 10. The colocynth-fruited, many-leaved Paſſion-flower. 11. The curled-flowered, many-leaved Paſſion-flower. 12. The round, hairy-fruited, ivy-leaved Paſſion-flower. 13. The elm-leaved Paſſion-flower. 14. The oblong, ſerrated-leaved Paſſion-flower. 15. The bicornate-leaved, bright red flowered Paſſion-flower. 16. The broad-leaved, apple-like-fruited Paſſion-flower. 17. The ſweet-ſcented, many-flowered Paſſion-flower. 18. The androſæmum-leaved Paſſion-flower. 19. The lunated-leaved, ſcarlet Paſſion-flower, called Murucuia.

Class the Twentieth. Order the Fifth.

GYNANDRIA HEXANDRIA.

Plant that have six stamina standing on the style.

ARISTOLOCHIA.

THE stigma is divided into six parts: there is no calyx: the corolla consists of a single petal, and is entire, and of a ligulated form: the capsule contains six cells, and is situated under the corolla.

Aristolochia foliis cordatis, caule erecto, floribus axillaribus confertis. Clematite Birthwort.

The erect, cordated-leaved Aristolochia, with clustered, axillary flowers.

The root is composed of a great number of thick fibres, which spread every way: the plant rises to two or three feet high: the stalk is striated, firm, and jointed, and supports itself tolerably well erect: the leaves are three inches long, two and a half broad, cordated at the base, and fixed on long pedicles; they stand alternately, one at a joint: the flowers are oblong, and of a pale colour; there stand several of them together, at the alæ of the leaves: the fruit is large and round, as big as a small apple.

It is a native of England, but not common; I have met with it in some woods in Kent. C. Bauhine calls it, Aristolochia clematitis recta; others, Aristolochia clematitis.

The other species are, 1. The blackish-flowered, round-rooted Aristolochia. 2. The pale-flowered, narrow-leaved Aristolochia. 3. The true, long-rooted Aristolochia. 4. The larger-leaved, Spanish, long Aristolochia. 5. The smaller-leaved, clematite Aristolochia. 6. The many-rooted Aristolochia, called Pistolochia. 7. The little, hoary Aristolochia. 8. The auriculated-leaved, Virginian Aristolochia, or Virginian Snakeroot. 9. The knotty-stalked, many-rooted Aristolochia. 10. The lanceolated-leaved, oriental Aristolochia. 11. The small-leaved, ever-green Aristolochia. 12. The white-flowered, clematite Aristolochia. 13. The horse-shoe-leaved Aristolochia. 14. The oblong-leaved, creeping-rooted, clematite Aristolochia. 15. The very long-flowered, cordated-leaved Aristolochia. 16. The trifid, or ivy-leaved Aristolochia. 17. The great-flowered, trifid-leaved Aristolochia. 18. The asarum-leaved Aristolochia.

PISTIA.

THE stigma is marked with six depressions, and seems divided into so many parts: there is no calyx: the corolla is formed of a single petal, ligulated, and undivided: the fruit is a capsule, with five cells, placed in the bottom of the corolla.

This genus comprehends the Kadda Pail of the Hortus Malabaricus.

There is but one known species of it, which, in many things, agrees with the aristolochiæ.

PISTIA.

The root is composed of a number of oblong, slender, fibrated tuberosities: it has no stalk: the leaves are ten inches long, and five broad; they have no pedicles, but are gradually broader from the base to the top, and are there deeply sinuated and undulated: the flowers grow without pedicles, in the midst of the leaves; they are oblong, whitish, moderately large, and hairy in the lower part.

It is a native of the East and West Indies. Van Rheede calls it, Kadda Pail.

Class the Twentieth. Order the Sixth.

GYNANDRIA DECANDRIA.

Plants which have ten stamina growing on the style.

HELICTERES.

THE stigma is divided into five parts: the calyx is oblique, and is composed of a single leaf: the corolla consists of five petals: the nectarium is composed of five leaves: the fruit is composed of five intorted capsules.

This genus comprehends the Isora of Plumier. There is but one known species of it.

HELICTERES. The Skrew-tree.

The root is brachiated; the tree grows to twenty feet high: the leaves are oval and pointed, serrated, and of a dusky green, and somewhat hairy; they are four inches long, three broad, and grow sometimes singly, sometimes several together: the flowers are large, yellow, and spotted with black; they stand on pedicles, and grow two or three together from the knots on the stalk; they are two inches long, and, when expanded, an inch wide at the top: the fruit is composed of five slender, long capsules, twisted spirally about one another, and resembles a skrew.

The tree is a native of the East and West Indies. Plumier calls it, Isora; Van Rheede, Isora Murri.

Class the Twentieth. Order the Seventh.

GYNANDRIA POLYANDRIA.

Plants which have very numerous stamina growing on the style.

GREWIA.

THE stigma is single; the calyx is composed of five leaves: the corolla consists of five petals, and has a nectariferous squamma at the base: the fruit is a berry containing four cells.

Of this genus there is only one known species.

GREWIA.

The root is brachiated and fibrated: the shrub grows to six feet high: the leaves are of an oval figure, and pointed; three inches long, near two broad, crenated, and of a shining green: the flowers stand four or five in a cluster; they are small, greenish on the outside, and white within, and the petals are reflex: the fruit is a small, hairy berry.

It is a native of the East Indies.

CALLA.

THE spatha is plane: the spadix is covered with floscules: there is no calyx, nor are there any petals: the fruits are berries, each containing many seeds.

These characters sufficiently distinguish the Calla, without a farther description.

ARUM.

THE spatha is formed of a single leaf, and is of a cucullated form: the spadix is naked in the upper part, but on the lower it has female flowers, and in the middle stamineous ones.

This genus comprehends the Arum, Arisarum, Colocasia, and Dracunculus of authors.

Arum

Arum acaule foliis haſtatis, ſpadice clavato. **Common Cuckow-pint.**
The haſtated-leaved Arum, with a clavated ſpadix.

The root is a roundiſh tuberoſity, of the ſize of a walnut, brown on the outſide, and white within, and lies at ſome depth in the earth: the leaves are four inches long, two and a half broad, haſtated, undivided at the edges, and of a ſtrong green, often ſpotted with black: the ſtem riſes to ſix or eight inches high, and at it's top carries a ſingle ſpatha, which is large and green, often purple within; in this are contained a number of male and female fructifications, with a long, red, or white body riſing above them; when this is fallen, and the ſpatha withered, there appear a number of red berries on the top of the ſtalk.

It is common under our hedges. C. Bauhine calls it, Arum vulgare.

The other ſpecies are, 1. Of thoſe called Arums. 1. The great, white-veined, Italian Arum. 2. The ſpotted-flowered, Arabian Arum. 3. The dwarf, broad-leaved, Ceyloneſe Arum. 4. The many-flowered, Egyptian Arum or Colocaſia. 5. The great, black-ſtalked Arum. 6. The great, nervous-leaved, long-rooted Arum. 7. The white, ſweet-flowered, African Arum. 8. The tall, great-flowered, Indian Arum. 9. The water-lily-leaved, eſculent Arum. 10. The leſſer eſculent Arum, with ſagittated leaves. 11. The white-flowered, great-leaved, climbing Arum. 12. The narrower-leaved, climbing Arum. 13. The Arum, with great ivy-like, perforated leaves. 14. The ſagittated-leaved, arboreſcent Arum. 15. The canna-leaved, cauleſcent Arum. 16. The rigid, narrow, and acuminated-leaved Arum. 17. The great, cordated-leaved, red-rooted Arum. 18. The great, climbing, yellow-flowered Arum. 19. The bifoliate-ſpotted, Arabian Arum, called Ardabar. 20. The ſcorzonera-leaved Arum. 21. The ſhort and narrow-leaved Arum. 22. The very, narrow-leaved Arum.

Of thoſe called Ariſarums are, 1. The great, broad-leaved Ariſarum. 2. The ſhorter-leaved Ariſarum. 3. The great, beaked-flowered Ariſarum. 4. The large, trifoliate Ariſarum. 5. The ſmaller trifoliate Ariſarum. 6. The narrower-leaved Ariſarum.

Of thoſe called Dracunculi are, 1. The common, great garden Dragons. 2. The greater, late-flowering Dragons. 3. The rough-ſtalked, Indian Dragons. 4. The cyclamen-rooted Dragons. 5. The creeping-rooted, polypody-leaved, prickly Dragons. 6. The many-leaved, ſmooth-ſtalked Dragons. 7. The trifid-ſtalked, many-leaved Dragons. 8. The climbing, American Dragons. 9. The climbing, trifoliate Dragons. 10. The dwarf, trifoliate Dragons. 11. The American, colocaſia-leaved Dragons. 12. The long, green, piſtilled Dragons. 13. The quinquifid-leaved, Indian Dragons. 14. The trilobate-leaved, Indian Dragons.

DRACONTIUM.

THE ſpatha is of the form of a boat; the ſpadix is covered: there is no calyx: the corolla conſiſts of five petals: the berries contain each ſeveral ſeeds.

Theſe characters ſufficiently diſtinguiſh the Dracontium, without a farther deſcription.

POTHOS.

THE ſpatha is globoſe; the ſpadix is globoſe and covered; there is no calyx: the corolla conſiſts of four petals: the fruit is a berry containing ſeveral ſeeds.

Theſe characters ſufficiently alſo diſtinguiſh the Pothos, without a farther deſcription.

ZOSTERA.

THE ſpadix is linear, and produces the fructifications only on one ſide; there is no calyx, nor any corolla: the ſtamina ſtand alternately, and the ſeeds are ſolitary.

Theſe characters ſufficiently alſo diſtinguiſh the Zoſtera, without a farther deſcription.

Class the Twenty First.

MONÆCIA.

Plants in which the male and female flowers are placed separately on the same plant.

OF the Monæcia some have only one stamen, some have three, some four, some five, some six, and some very numerous ones; some also are monadelphous, or have their stamina connected into one body at their bases; others are Syngenesious, and others Gynandrous. They may therefore be conveniently arranged, from these distinctions, into eight separate orders.

Class the Twenty First. Order the First.

MONÆCIA MONANDRIA.

Plants which have the male and female flowers separate, but on the same plant; and have only a single stamen in the male flowers.

CERATOCARPUS.

IN the male flower, the calyx is divided into two parts; there is no corolla: the stamen is single, and of a very great length.

In the female flower, the calyx is composed of two leaves, and grows to the germen; there is no corolla: the styles are two: the seeds are compressed and bicornate.

Of this genus there is only one known species.

CERATOCARPUS.

The root is fibrous; the stalk is slender, erect, ramose, and green: the leaves are long, narrow, and grassy; they are of a pale green, and sharp-pointed: the male flowers grow three together, in the divarications of the branches; the female flowers stand singly in the alæ of the leaves, and are each succeeded by a single hard seed, somewhat like that of the bidens.

It is a native of Russia. Buxbaum calls it, Ceratocarpus.

ZANICHELLIA.

THE male flower consists only of a single stamen; it has neither calyx nor corolla: in the female flower, the calyx is composed of a single leaf; there is no corolla: the germina are about four, and the seeds are as many.

This genus comprehends the Alyoides of Vaillant, the Aponogeton of Pontedera, and the Graminifolia of Dillenius.

Zonichellia foliis longioribus.
The longer-leaved Zonichellia.

The root is composed of a great cluster of whitish, slender, long fibres: the plant grows to eight or ten inches high: the stalk is round, slender, jointed, and weak: the leaves stand alternately, one at each joint; they are three or four inches long, very narrow, of a dusky green colour, and tender: toward the tops of the ramifications they are shorter and more numerous: the flowers are small and whitish.

It is an inhabitant of the fresh water rivers and ditches in most parts of Europe; we have it in Lincolnshire in many places. Dillenius calls it, Graminifolia; C. Bauhine, Potamogeiton capillaceum capitulis ad alas trifidis. There is but one other known species of this genus, which is the shorter, grassy-leaved Zonichellia.

CYNOMORIUM.

IN the male flower, the calyx is an amentum, of an imbricated form; there is no corolla: in the female flower, the calyx is in the same amentum with the male; there is no corolla: the style is simple, and the seed is single and roundish.

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Cypripedium

Bermudiana

Orchis

Passiflora

Pistia 21

Coix

Iatropha

Ricinus

Sparganium

Phyllanthus

Cucurbita

Cynomorion

Helicteres

Bryonia

Sicyos

Momordica

B. Cole Sculp.

CYNOMORIUM. Maltese Fungus.

The Cynomorium has properly neither root nor leaves: it grows to the roots of several different shrubs and plants, in the manner of the broom-rape. It affixes itself to these by a roundish thick base, and leaves a hollow on the root, when taken off. It grows to seven or eight inches high, and is often three quarters of an inch in diameter, usually bent two or three times, very rarely quite strait: it's lower part is thick, covered with short, oval, pointed squammæ; it's upper part, for two thirds of the whole plant, has these squammæ less numerous, and often emarginated, and is loaded with flowers which are minute, and soon fall off. The whole plant is a fine scarlet colour.

It is frequent about the sea-coasts of the island of Malta, growing to the roots of different plants as well as shrubs. Boccone calls it, Fungus typhoides, coccineus, Melitensis; others simply, Fungus Melitensis. It is a very powerful astringent.

Class the Twenty First. Order the Second.

MONÆCIA TRIANDRIA.

Plants which have separate male and female flowers on the same plant, and have in each of the male flowers three stamina.

ZEA

IN the male flower, the calyx is a biflorous glume, and has no aristæ or awns: the corolla is also a glume without awns. In the female flower, the calyx is a glume, formed of two valves; the corolla is also a glume, formed of two valves: the style is simple, filiform, and pendulous: the seeds are single, and are immersed in a long receptacle.

The male flowers are arranged in lax and loose spikes, and stand on the upper parts of the plants: the female flowers stand in thick, compact spikes, covered with leaves below the others.

This genus comprehends the Mays of Tournefort, the Indian wheat of authors. There is but one known species of it, though authors, from it's varieties, have made several imaginary ones.

ZEA. Indian Corn.

The root is fibrous; the plant grows to eight or ten feet high: the stalk is an inch, or more, in diameter, erect, robust, and succulent: the leaves are very numerous, two feet, or more, in length, of a bright grassy green, narrow, and pointed at the extremities: on the upper part of the stalk stand long, loose spikes, or light ears, of a whitish colour, containing the male flowers; and in different parts, lower down, stand the spikes of female flowers, which are succeeded by the seeds; these are large and pressed closely together, forming a very long and thick ear or spike: the most natural colour of the seeds is yellowish, but they vary extreamly in this, and are sometimes violet-coloured, sometimes bright red, sometimes black, sometimes quite white: the spikes of male flowers are also sometimes yellow, sometimes red, sometimes blue, and sometimes variegated with two, or more, of these colours: the plant is evidently the same under all these variations, which are no more than the change of colour in our garden-beans, some of which will be purple, others white, on the same plant; yet have all these been made distinct species by authors, under the names of Mays granis violaceis, Mays spica cærulea, &c.

COIX.

THE male flowers are formed into a lax spike; the female ones are few in number, and are situated at the base of the male spike.

In the male flowers, the calyx is a glume, containing two flowers, and has no awns: the corolla also is a glume, without any aristæ or awns. In the female, the calyx is also a glume, containing two flowers; and the corolla is a glume without any aristæ: the style is divided into two parts; and the seed is covered by the indurated calyx. This genus comprehends the Lachryma Job of Tournefort and others.

Coix

Coix ſeminibus ovatis.
The oval-ſeeded Coix. **Job's Tears.**

The root is fibrous: the plant grows to three feet high: the ſtalk is round, ſlender, and jointed; the leaves are graſſy, a foot and half long, and two inches wide: the flowers ſtand in the alæ of the leaves; the ſpikes are ſlender and ſtamineous, and at their bottom there are ſometimes two ſeeds, more frequently only one; they are large, beautiful, hard, of a fine poliſh, and of a purpliſh colour.

It is a native of North America. C. Bauhine calls it, Lithoſpermum arundinaceum; others, Lachryma Job.

The other ſpecies are, 1. The broader-leaved Coix. 2. The tall, red-leaved Coix.

CAREX.

IN the male flowers, the amentum is imbricated; the calyx is compoſed of a ſingle leaf, and there is no corolla. In the female flowers, the amentum is alſo imbricated; the calyx is compoſed of a ſingle leaf, and there is no corolla; but in theſe the nectarium is tridentated and inflated: the ſtigmata are three; and the ſeed is of a triquetrous form, and is ſituated within the nectarium.

This genus comprehends the Cyperoides of Tournefort, and the Scirpoides of Mont. the carex of Dillenius.

Carex ſpicis fœmineis pendulis brevioribus. **Short-ſpiked Cyperus Graſs.**
The Carex, with the female ſpikes pendulous and ſhort.

The root is compoſed of a great cluſter of black, tough fibres: the leaves are two feet, or more, in length, carinated, edged, and pointed at the ends, and of a yelloweiſh-green colour: the ſtalk is two or three feet high; it is triangular and ſharp: on it's top it produces a number of pendulous ſpikes, an inch and a half in length, and conſiderably thick, and of a yellowiſh colour, with a ſteril, duſky ſpike of male flowers, and hermaphrodite ones at the top.

It is common about the ſides of ponds. C. Bauhine calls it, Gramen cyperoides ſpica pendula breviore, to diſtinguiſh it from another ſpecies, which has much longer pendulous ſpikes.

The other ſpecies of Carex are, 1. The broad-leaved, brown-ſpiked Carex. 2. The great, broad-leaved, greeniſh brown-ſpiked Carex. 3. The little, narrow-leaved, greeniſh-ſpiked Carex. 4. The Carex, with very long and ſlender pendulous ſpikes. 5. The ſhort-headed, aculeated Carex. 6. The ſhort-headed, not aculeated Carex. 7. The many-ſpiked, woolly Carex. 8. The rounded, oblong, erect-ſpiked Carex. 9. The great, black, and yellow-headed, vernal Carex. 10. The leſſer, black, and yellow-headed Carex. 11. The Carex, with numerous, yellow ſpikes on the top of the ſtalk. 12. The Carex, with ſhort ſpikes very diſtant from one another. 13. The ſlender-ſpiked, wood Carex. 14. The little, white, many-ſpiked Carex. 15. The narrow-leaved Carex, with ſeſſile ſpikes in the alæ of the leaves. 16. The ſmall, thick-ſpiked Carex. 17. The veſicated-ſpiked, larger Carex. 18. The veſicated-ſpiked, ſmaller Carex. 19. The long-ſpiked Carex, with long, nutant pedicles. 20. The long, yellow ſpiked Carex.

SPARGANIUM.

THE male flowers have a roundiſh amentum; the calyx is formed of two leaves, and there is no corolla. In the female flowers, the amentum is alſo roundiſh; the calyx is compoſed of three leaves, and there is no corolla: the ſtigma is bifid; and the fruit is a dry drupe, containing two ſeeds.

Sparganium foliis adſurgentibus triangularibus. **Common Burreed.**
The Sparganium, with aſſurgent, triangular leaves.

The root is compoſed of a number of long and thick fibres: the leaves are numerous, two feet long, half an inch broad, triangular, and of a bright green: the ſtalk is round, thick, tender, and two feet, or more, in height; at it's top ſtand a number

of

of round cluſters of flowers; they are white and ſmall: the fruit, when ripe, is round, of the bigneſs of a large nutmeg, and echinated.

The plant is common with us about waters. The ſtalk is ſometimes ſimple, ſometimes ramoſe; and authors have hence erroneouſly divided it into two ſpecies, under the names of Sparganium ramoſum, and Sparganium non ramoſum.

TYPHA.

THE male flowers are arranged into a cylindric amentum: the calyx is compoſed of three leaves, and there is no corolla. The female flowers form alſo a cylindric amentum, below the male ones: the calyx has a hairy capillament; there is no corolla: the ſeed is ſingle; the ſeta ſtands on capillary pappus.

Of this genus there is but one known ſpecies.

TYPHA.

The root is oblong, creeping, and fibrated: the plant grows to ſix or eight feet high: the ſtalk is round, thick, ſmooth, gloſſy, firm, and ſolid, and is jointed at conſiderable diſtances: the leaves are graſſy, two feet, or more, in length, and not more than an inch broad, triangular, and edged in ſuch a manner, that they will cut the hands on drawing through them; they are thick and ſpungy, and ſurround the ſtalk a great way at their baſe: the top of the ſtalk is ornamented with an oblong, reddiſh, compact, cylindric ſpike, containing the ſeeds, with a large quantity of down: the ſpike, containing the male flowers, ſtands above this, and is light and ſlender.

It is common in our ditches. C. Bauhine calls it, Typha paluſtris major. It varies in it's ſize, and in the thickneſs of the ſpike; and authors have hence made two other imaginary ſpecies.

PHYLLANTHUS.

IN the male flowers, the calyx is divided into three parts, and is of a campanulated figure, and there is no corolla. In the female flowers, the calyx is alſo divided into three parts, and there is no corolla; the ſtyles are three and bifid: the fruit is a capſule containing three cells; the ſeeds are ſingle.

Phyllanthus foliis ovatis, caudice arboreo.
The oval-leaved, ſhrubby Phyllanthus.

The root is brachiated: the ſhrub grows to five or ſix feet high, and it's trunk to the thickneſs of a man's thumb: the branches are numerous, and very ſlender; the leaves are oval, and placed alternately; they are three quarters of an inch long, near half an inch broad, obtuſe, even at the edges, and of a pale green: the flowers are ſmall and white; they ſtand ſeparately on ſlender, reddiſh pedicles, half an inch, or more, in length: the fruit is a little roundiſh capſule, with ſix ſeeds.

It is common in the Eaſt Indies in watery places. Van Rheed calls it, Niruri.

The other ſpecies are, 1. The herbaceous-ſtalked, pinnated-leaved Phyllanthus. 2. The larger-flowered Phyllanthus.

TRAGIA.

IN the male flowers, the calyx is divided into three parts, and there is no corolla. In the female flowers alſo, the calyx is divided into three parts, and there is no corolla: the ſtyle is divided into three parts; and the fruit is a capſule of a tricoccous form, containing three cells, and in each a ſingle ſeed.

It is an American, deſcribed by Plumier, 12. Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

AXYRIS.

IN the male flowers, the calyx is compoſed of four leaves, and there is no corolla. In the female flowers, the calyx is compoſed of four leaves, and obtuſe; there is no corolla: the ſtyles are two, and the ſeed is ſingle and roundiſh.

Theſe characters ſufficiently diſtinguiſh the Axyris, without a farther deſcription.

Class the Twenty First. Order the Third.

MONÆCIA TETRANDRIA.

Plants which have separate male and female flowers on the same plant, and have in each of the male flowers four stamina.

URTICA.

IN the male flowers, the calyx is composed of four leaves, and there is no corolla: the nectarium is situated in the center, and is of the figure of a cup. In the female flowers, the calyx is formed of two valves: there is no corolla, and the seed is single.

Urtica foliis oppositis, amentis fructiferis globosis.
The opposite-leaved Urtica, with the fructiferous amenta globose.

The Roman Nettle.

The root is creeping and fibrated: the plant grows to three feet in height: the stalk is erect, thick, firm, of a deep green colour, and hairy: the leaves stand in pairs, opposite to one another; they are two inches and a half long, two inches broad, pointed at the extremity, and deeply serrated about the edges: the male flowers are small and greenish, or yellowish: the fruit is large, rounded, and resembles little balls: the plant is all over hairy, and stings on the touch, in the manner of the common Nettle, only more violently.

It is a native of some parts of England, and is kept in our gardens. C. Bauhine calls it, Urtica urens pilulas ferens; Lobel and others, Urtica Romana.

The other species are, 1. The tripartite-leaved, tall, Siberian Urtica. 2. The common, tall Urtica. 3. The little, annual Urtica. 4. The great, racemous, Canada Urtica. 5. The myrrhis-leaved, Canada Urtica. 6. The great, hazel-leaved Urtica. The lesser, Roman Nettle, called Urtica pilulifera parietariæ foliis, is only a variety of the other.

BUXUS.

IN the male flowers, the calyx is formed of two leaves: the corolla consists of two petals, and there are in it the rudiments of a germen.

In the female flowers, the calyx consists of four leaves; the corolla of three petals: the styles are three; the fruit is a capsule, with three beaks, and contains three cells, with two seeds in each.

Of this genus there is but one known species, though authors have divided it, from it's varieties, into several.

BUXUS. **The Box-shrub.**

The root is brachiated: the shrub retains it's leaves all the winter: it grows to two feet in height, sometimes to a great deal more: it's trunk is thick and robust; it's branches numerous: it's bark is rough and whitish; it's wood is yellow, and very firm: the leaves are short, obtuse, and of a deep green colour: the flowers are small and yellow: the fruit is a dry capsule, of the bigness of a small pea.

It is wild in many parts of England. C. Bauhine calls it, Buxus arborescens.

ALNUS.

IN the male flowers, the calyx consists of a single leaf, divided into four segments at the extremity, and contains three flowers: the corolla is composed of a single petal, divided into four parts. In the female flowers, the calyx is formed of a single leaf, and divided into five segments; it contains two flowers: the fruit is a roundish cone, and the seeds are angulated.

Of this genus there is but one known species.

ALNUS. The Alder-tree.

The root is brachiated and ſpreading: the tree riſes to twenty-five feet high, or more, ſometimes with a ſingle trunk, but more uſually with a number of ſhoots together: the bark is ſmooth and purpliſh; the leaves are roundiſh, of a duſky green colour, two inches, or more, in diameter, and glutinous to the touch: the flowers are ſmall and greeniſh: the fruit is a little cone, ſcarce ſo large as a nutmeg.

The ſhrub is common with us by waters. C. Bauhine calls it, Alnus rotundifolia glutinoſa viridis. It's leaves are uſually even at the edges, but ſometimes they are curled, or undulated, ſometimes ſerrated a little, and ſometimes they are rather oblong than roundiſh: authors who have obſerved theſe ſeveral varieties have raiſed them to ſpecies, and made eight or ten Alni out of one.

BETULA.

IN the male flower, the calyx is formed of a ſingle leaf, and is divided into three ſegments, and contains three flowers: the corolla is formed of a ſingle petal, divided into four parts. In the female flower, the calyx is alſo formed of a ſingle leaf, and is lightly divided into three ſegments, but it contains only two flowers: the fruit is a cylindric cone: the ſeeds are on each ſide edged with a membrane.

Betula foliis acuminatis ſerratis. The Birch-tree.
The Betula, with pointed, ſerrated leaves.

The root is large and ſpreading: the tree uſually grows with a regular trunk, to a conſiderable height: the branches are numerous; the young ſhoots ſlender, tough, and depending; the bark of theſe is purpliſh; that of the trunk whitiſh: the leaves ſtand on long pedicles; they are of a roundiſh figure, but terminate in a point, ſerrated, of a deep green colour, and about two inches in diameter: the male flowers hang in iuli, or katkins: the fruit is a cone, of a cylindric figure, and ſmall.

It is common in our woods. C. Bauhine and others call it, ſimply, Betula.

Claſs the Twenty Firſt. Order the Fourth.

MONÆCIA PENTANDRIA.

Plants with male and female flowers ſeparate on the ſame plant, and with five ſtamina.

XANTHIUM.

IN the male flower, the common calyx is imbricated; the corolla is compoſed of a ſingle petal, divided into five ſegments, and of an infundibuliform ſhape: the receptacle is paleaceous. In the female flower, the calyx is an involucrum, formed of two leaves, and containing two flowers: there is no corolla: the fruit is a dry, muricated drupe, divided into two parts, containing two cells, and in each a ſingle ſeed.

Xanthium caule inermi. The leſſer Bur-dock.
The not prickly ſtalked Xanthium.

The root is oblong, ſmall, white, and fibrated: the plant riſes to two feet high: the ſtalk is thick, hairy, but not prickly, and is uſually ſpotted: the leaves ſtand on long pedicles; they are large, roundiſh, crenated, and uſually reddiſh; they are ſoft to the touch, and hairy: the male flowers are ſmall and whitiſh; they ſtand in cluſters in the alæ of the leaves: the fruit is oblong and echinated, and ſticks to any thing it touches, in the manner of the common burs of the Bur-dock, whence the Engliſh name.

It is wild in ſome parts of England, but is not common; I met with it this laſt ſummer in Lincolnſhire. C. Bauhine calls it, Lappa minor, Xanthium Dioſcoridis.

The other ſpecies are, 1. The great, crooked-ſpined, American Xanthium. 2. The prickly, jagged-leaved Xanthium.

AMBROSIA.

IN the male flower, the common calyx is formed of a ſingle leaf: the corollæ are each formed of a ſingle petal, of an infundibuliform ſhape, and divided into five ſegments: the receptacle is naked. In the female corolla, the calyx is formed of a ſingle leaf, and has five indentings on the belly; it contains only a ſingle flower: there is no corolla: the fruit is a nut, formed of the indurated calyx, and containing only one ſeed.

Ambroſia foliis trilobis ſerratis. Plane-tree-leaved Ambroſia.
The trilobate, ſerrated-leaved Ambroſia.

The root is oblong, white, and fibrated: the ſtalk is robuſt, hairy, and firm: the plant grows to five feet high: the leaves are large and palmated, or deeply divided into three long, lanceolated ſegments; theſe are ſerrated, and the whole leaf is hairy: the flowers are greeniſh and ſmall; they ſtand in long, ſlender ſeries.

It is a native of Virginia. Ray calls it, Ambroſia inodora foliis aſperis trifidis.

The other ſpecies are, 1. The common Ambroſia. 2. The tall, mugwort-leaved, ſcentleſs Ambroſia.

PARTHENIUM.

IN the male flower, the common calyx conſiſts of five leaves, and the corollulæ of the diſk are formed each of a ſingle petal. In the female flower, the corollulæ of the radius are five, two on each ſide, and a female one in the middle, ſituated on a ſingle, naked ſeed.

This genus comprehends the Partheniaſtrum of Niſſole, the Hyſterophorus of Vaillant, and the Tarchonanthus of the ſame and ſome other authors.

Parthenium foliis compoſito-multifidis. American Feverfew.
The compoſito-multifid-leaved Parthenium.

The root is fibrous and white: the plant grows to two feet high: the ſtalk is erect, robuſt, and ramoſe: the leaves are large, finely divided, and ſomewhat reſemble thoſe of the common wormwood: the flowers are ſmall and white.

It is a native of Jamaica. Vaillant calls it, Hyſterophorus ambroſiæ folio.

The other ſpecies are, 1. The broad-leaved Parthenium; and, 2. The larger-flowered Parthenium.

IVA.

IN the male flower, the common calyx is formed of three leaves: the corollulæ of the diſk are formed each of a ſingle petal, divided into five ſegments: the receptacle is hairy. In the female flower, the floſcules of the radius are five: there is no corolla: the ſtyles are two, and long: the ſeed is naked and obtuſe.

Iva foliis lanceolato-ovatis ſerratis caule annuo.
The annual-ſtalked Iva, with lanceolato-ovate, ſerrated leaves.

The root is oblong, annual, and white: the plant riſes to five feet high: the ſtalk is erect, robuſt, ſtriated, and hairy: the leaves ſtand on long pedicles; they are placed oppoſite, toward the bottom, and alternately toward the top of the ſtalk, and are ſerrated, and of a deep green colour: the top of the plant is terminated by a cluſter of flowers, which ſtand alternate, with floral leaves under them.

It is a native of America. Juſſieu makes it a Tarchonanthus; and Van Royen calls it, Tarchonanthus foliis cordatis ſerratis trinerviis; B. Juſſieu.

The other ſpecies are, 1. The perennial, large-flowered Iva. 2. The divided-leaved Iva.

AMARANTHUS.

IN the male flower, the calyx is formed of three, or of five, leaves: there is no corolla: the ſtamina are equal in number to the leaves of the cup; they are three or five. In the female flower, the calyx is compoſed of three, or of five, leaves: there is no corolla: the ſtyles are three: the fruit is a capſule, containing only one cell, and opening horizontally.

Amaranthus racemis cylindraceis pendulis longiſſimis.
The Amaranthus, with very long, pendulous, cylindric cluſters. **Great Amaranth.**

The root is white and fibrated: the plant grows to five feet high: the ſtalk is thick, furrowed, ramoſe, and uſually reddiſh: the leaves are very large, oblong, ſcabrous, pointed at the extremity, and uſually variegated with green and red: the flowers ſtand in long cluſters, five or ſix inches, ſometimes a foot, in length, growing from the alæ of the leaves; they are purpliſh, and the ſtamina yellow.

It is a native of Perſia and of South America. C. Bauhine calls it, Amaranthus maximus. It varies extremely by culture, and has hence been divided by authors into a number of imaginary ſpecies.

The more certainly diſtinct are, 1. The green-ſpiked, North American Amaranthus, 2. The narrower-leaved, ſhorter-cluſtered Amaranthus. 3. The prickly, Eaſt-Indian Amaranthus. 4. The broad-leaved Amaranthus.

Claſs the Twenty Firſt. Order the Fifth.

MONÆCIA HEXANDRIA.

Plants with male and female flowers on the ſame plant, and with ſix ſtamina in the male flower.

ZIZANIA.

IN the male flower, there is no calyx: the corolla is a glume, formed of two valves; theſe have no ariſtæ, or awns, and are mixed among the female flowers. In the female flower, there is no calyx: the corolla is a glume, formed of a ſingle valve, of a cucullated form, and terminated by an ariſta, or awn: the ſtyle is divided into two parts: the ſeed is ſingle, and is placed in the bottom of the corolla, which opens horizontally to let it out.

It is a native of Virginia, Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

Claſs the Twenty Firſt. Order the Sixth.

MONÆCIA POLYANDRIA.

Plants with male and female flowers on ſeparate parts of the ſame plant, and with numerous ſtamina.

POTERIUM.

IN the male flower, the calyx is compoſed of four leaves: the corolla is formed of a ſingle petal, divided into four ſegments: the ſtamina are from thirty to forty: the calyx of the female flower is compoſed of four leaves: the corolla is formed of a ſingle petal, and divided into four ſegments: the piſtils are two: the fruit is a berry, the outer cruſt of which is formed of the indurated tube of the corolla.

This genus comprehends the Pimpinella of Tournefort and others.

Poterium inerme filamentis longissimis. **Burnet.**
The smooth Poterium, with very long filaments.

The root is oblong, slender, and brown: the stalks are angular, brown, and a foot, or more, in height: the leaves are pinnated; the pinnæ are numerous, short, and serrated round the edges: the flowers are purplish; the antheræ yellow: the flowers are collected into little, roundish, or oval, heads, and the filaments sometimes hang down to an inch in length from them.

It is frequent in dry pastures. C. Bauhine calls it, Pimpinella, five Sanguisorba minor.

The other species are, 1. The greater Burnet. 2. The tall, auriculated-leaved Poterium. 3. The long-spiked, American Poterium. 4. The agrimony-leaved, scented Poterium. 5. The larger, short-spiked, white-flowered Poterium. 6. The evergreen, prickly Poterium.

SAGITTARIA.

THE calyx of the male flower is formed of three leaves: the corolla is formed of three petals, and the stamina are about four-and-twenty: the calyx of the female flower is formed of three leaves, and the corolla of three petals: there are no pistils: the seeds are numerous and naked.

Sagittaria foliis sagittatis. **Water Arrow-head.**
The arrow-headed-leaved Sagittaria.

The root is oblong, divaricated, oblique, white, fungous, and fibrated; from this rise stolones, of the thickness of a rush, and of two or three feet long, taking root in several places: the leaves are three or four inches long, sagittated at the base, pointed at the extremity; they float on the surface of the water, and are affixed to long pedicles: the stalks are little taller than the leaves; they are nearly round, striated, thick, and fungous: the flowers are beautiful and white; they stand usually three together, and are ornamented in the center with a number of purple antheræ.

It is common in shallow waters. C. Bauhine calls it, Sagitta aquatica latifolia. It varies greatly in size, and in the shape of the leaves; and authors have hence distinguished it into several species, under the names of Sagitta latifolia, and angustifolia; Sagitta major, Sagitta minor, and the like.

MYRIOPHYLLUM.

THE male flower has the calyx formed of four leaves: there is no corolla: the stamina are eight: the calyx of the female flower is composed of four leaves: there is no corolla: the pistils are four; there are no styles: the fruit is composed of four naked seeds.

Myriophyllum floribus omnibus verticillatis. **Small, water Milfoil.**
The Myriophyllum, with all the flowers verticillate.

The root is fibrous: the branches spread upon the surface of the mud, and take root in different places: the stalks that are erect rise to two or three inches above the surface of the water: the leaves are pinnated, and the pinnæ very fine and slender; five leaves usually stand at a joint; they are largest at the bottom, and smaller all the way up, so that they give the whole plant a pyramidal form: the flowers stand principally on that part of the stalk that is out of the water; they are small and whitish, and stand in round clusters, at distances, above one another.

It is common in shallow waters. C. Bauhine calls it, Millefolium aquaticum flosculis ad nodos.

The other species are, 1. The larger, water Milfoil. 2. The broad-leaved, water Milfoil.

CERATOPHYLLUM.

THE calyx of the male flower is divided into ſeveral ſegments: there is no corolla: the ſtamina are from ſixteen to twenty in number. The calyx of the female flower is divided alſo into ſeveral ſegments: there is no ſtyle: the ſeed is ſingle and naked.

This genus comprehends the Hydroceratophyllon and Dichotophyllum of authors.

Of this genus there is but one known ſpecies.

CERATOPHYLLUM.

The root is fibrous: the plant grows to a foot, or more, in length, and is uſually wholly immerſed in the water: the leaves are numerous, and are each divided into four, or into eight, ſegments; they are harſh to the touch, and of a duſky green colour: the tops of the plant look larger than any other part, and the flowers, which are ſmall and greeniſh, ſtand there in the alæ of the leaves.

It is common in ſhallow waters. Tournefort calls it, Hydroceratophyllon folio aſpera quatuor cornibus armato; and a variety of it, Hydroceratophyllum folio lævi octo cornubus.

QUERCUS.

THE calyx of the male flower is divided into five ſegments at the the top: there is no corolla: the ſtamina are from five to ten in number. The calyx of the female flower is formed of a ſingle leaf, undivided at the edge, and rough: there is no corolla: the ſtyles are from two to five: the ſeed is ſingle, large, and oval.

Quercus foliis anguſtis acutis.
The narrow-leaved Oak.
The Willow-leaved Oak.

The root is large and brachiated: the tree grows to a vaſt height and ſize: the bark is brown and rough; the wood extremely firm and ſolid: the leaves ſtand very thick on the branches; they are four or five inches long, not more than half an inch broad, undivided, and pointed at the ends, and very much reſemble thoſe of the common, long-leaved willow: the flowers are ſmall and browniſh: the fruit is a large acorn.

It is a native of America. Plukenet calls it, Quercus ſalicis folio.

The other ſpecies are, 1. The common Oak. 2. The broad-leaved, ever-green Oak. 3. The cheſnut-leaved Oak. 4. The broad and ſhort-leaved, Oak, called the black Oak. 5. The deeply-ſinuated, or Spaniſh, Oak. 6. The prickly-leaved, American Oak. 7. The more ſlightly-ſinuated, prickly, American Oak. 8. The dwarf Oak, the Fagus and Eſculus of the antients. 9. The echinated-cupped Oak. 10. The African Oak, with long acorns. 11. The little, ſhort-leaved Oak.

Theſe are all called Quercus and Oaks by authors, but the Ilex and Suber are alſo of this genus.

Of the Ilex kind there are, 1. The oblong and ſerrated-leaved Ilex. 2. The narrow, undivided-leaved Ilex. 3. The roundiſh, ſoft-leaved Ilex. 4. The holly-leaved Ilex. 5. The woolly-leaved Ilex. 6. The narrower-leaved, ſerrated Ilex. 7. The broad-leaved, ſpungy, barked Ilex, or Cork-tree. 8. The narrow-leaved Cork-tree.

JUGLANS.

THE calyx of the male flower is formed of a ſingle leaf, and is of the ſhape of of a ſquamma, or ſcale: the corolla is divided into ſix parts, and the ſquammæ are eighteen in number. In the female flower, the calyx is divided into four ſegments, and ſituated upon the germen: the corolla is divided into four parts: the ſtyles are two: the fruit is a drupe, with a ſulcated kernel.

Juglans foliis ovalibus, glabris, obsolete serratis, omnibus subæqualibus.
The oval, smooth, obsoletely serrated-leaved Juglans, with all the leaves nearly equal. **Common Walnut.**

The root is brachiated and spreading: the tree grows to a considerable height, and is very ramose and diffuse, from a third of it's height upwards: the leaves are pinnated; the pinnæ are large, oval, of a faint green colour, and obscurely serrated: the male flowers hang down in long catkins: the fruit is large, and covered with a fleshy rind, of a very disagreeable taste.

It is a native of Germany; we have it every-where in gardens. C. Bauhine calls it, Nux Juglans, sive Regia vulgaris.

The other species are, 1. The laciniated-leaved Juglans. 2. The serrated-leaved Juglans. 3. The lanceolato-leaved, serrated Juglans, or Virginian, black Walnut. 4. The broader and shorter-leaved Juglans. 5. The long, narrow, and undivided-leaved Juglans. 6. The narrow, serrated-leaved Juglans.

FAGUS.

THE calyx of the male flower is of a campanulated figure, and divided into five segments: there is no corolla: the stamina are twelve in number. The calyx of the female flower is indented in four places at the rim: there is no corolla: the styles are three: the fruit is a muricated capsule, formed of what was the calyx; it is composed of four valves, and contains two seeds.

This genus comprehends the Fagus and the Castanea of authors.

Fagus foliis lanceolatis acuminate serratis.
The lanceolate and acuminately serrated-leaved Fagus. **The common Chesnut-tree.**

The root is brachiated, large, and spreading: the tree is moderately tall, ramose, and diffuse: the leaves are oblong, pointed at the ends, of a bright green colour, and deeply and sharply serrated: the male flowers hang in a kind of catkins; the female flowers stand in the gemmæ, and are succeeded by large, echinated fruits, within which are contained the chesnuts that we eat.

It is a native of Italy, France, and Germany. C. Bauhine calls it, Castanea sativa.

The other species are, 1. The dwarf, racemous Fagus. 2, The large-leaved, American Fagus. 3. The common Fagus, or Beech-tree.

CORYLUS.

THE calyx of the male flower is composed of a single leaf, divided into three segments, and of a squammose figure; the flower contained in it is but one: there is no corolla: the stamina are eight. In the female flower, the calyx is formed of two leaves, and lacerated: there is no corolla: the styles are two, and the fruit is an oval nut: the male flowers are disposed in form of a long catkin; the female ones are sessile, and included in a gemma, on a different part of the shrub.

Corylus stipulis ovatis obtusis.
The Corylus, with obtuse, oval stipulæ. **The Hazel.**

The root is brachiated, fibrated, and diffuse: the shrub grows to ten or fifteen feet high: the leaves are of a roundish figure, rugose, and serrated at the edges: the fruit is a nut of an obtuse, oval figure, included at it's base in a close husk.

It is common in our hedges. C. Bauhine and others call it, Corylus sylvestris.

Culture produces from this the several kinds of filbert, or Corylus sativa, which, though no more than varieties, are described as species by too many authors. The really distinct species are, 1. The dwarf Corylus; and, 2. The cluster-fruited Corylus.

CARPINUS.

THE calyx of the male flower conſiſts of a ſingle leaf, and is a cillated ſquamma or ſcale; there is no corolla: the ſtamina are twenty in number. The calyx of the female flower conſiſts of a ſingle leaf, and is alſo a ciliated ſquamma; there is no corolla: the germina are two: the ſtyles of each are two; the fruit is an oval nut.

The male flowers are arranged into a cylindric amentum; the female into an oblong one.

Carpinus ſquammis ſtrobilorum planis. **The Horn-beam-tree.**
The Carpinus, with the ſquammæ of the ſtrobili plane.

The root is ſpreading; the tree grows to a very conſiderable height and ſize; the bark is whitiſh and ſmooth; the wood white and firm: the leaves are two inches and a half long, and near two inches broad, ſharply ſerrated, and terminate in a point; they are of a bright green and ſmooth: early in ſpring there are catkins hanging from the branches: the fruit is oblong, and ſomewhat pyramidal.

It is a native of moſt parts of Europe. C. Bauhine calls it, Oſtrya ulmo ſimilis.

The other ſpecies are, 1. The broader-leaved Carpinus. 2. The large, ſhort-fruited Carpinus.

PLATANUS.

THE calyx of the male flowers is a catkin of a roundiſh figure; the corolla is ſcarce viſible: the antheræ grow round a filament. In the female flowers, the calyx is alſo a globoſe amentum: the corolla conſiſts of ſeveral petals; the ſtyles have reflex ſtigmata: the ſeeds are numerous, and are mucronated with the ſtyle, and pappous at the baſe.

Platanus foliis palmatis. **The Oriental Plane-tree.**
The palmated-leaved Platanus.

The root is brachiated; the tree grows to a very conſiderable ſize, and is ramoſe and ſpreading: the bark is ſmooth; the wood firm and pale-coloured: the leaves are very large, of a palmated figure, and divided into ſix or ſeven parts at the edge; they ſtand on moderately long pedicles: the fruit is a round, rough ball, of the bigneſs of a large nutmeg.

It is a native of the Eaſt. C. Bauhine and others call it, Platanus orientalis.

The other ſpecies are, 1. The ſmaller and more deeply divided-leaved Platanus. 2. The lobated-leaved Platanus.

LIQUID AMBAR.

THE common calyx of the male flowers is formed of four leaves; there is no corolla: the ſtamina are very numerous, ſlender filaments. The calyces of the female flower are collected into a kind of globe; each of them conſiſts of four leaves; there is no corolla: the ſtyles are two; the fruit is compoſed of a number of bivalve capſules, formed into a globular body, and each containing ſeveral ſeeds.

There is but one known ſpecies of this genus.

LIQUID AMBAR.

The root is brachiated and ſpreading; the tree grows to a vaſt ſize; the leaves are of a very regular and beautiful figure, of the breadth of a man's hand, and divided into ſeveral lobes at the end, in the manner of thoſe of the maple: the flowers are ſmall; the fruit is an echinated, globular body.

It is a native of America, where a very fragant reſin is obtained from it in great abundance. Ray calls it, Styrax aceris folio.

Class the Twenty First. Order the Seventh.

MONOÆCIA MONADELPHIA.

Plants, with the male and female flowers separate on the same individual, with the stamina in the male ones, connected into one body at their base.

PINUS.

THE calyx of the male flower is composed of four leaves; there is no corolla: the stamina are numerous, and the antheræ are naked. In the female flower, the calyx is a squamma of a strobilus, and contains two flowers; there is no corolla: the pistil is single, and the seed is received into a membranaceous ala.

Pinus foliis geminis primordialibus solitariis ciliatis.
The Pinus, with two leaves together; the primordial ones single and ciliated.

The manured Pine.

The tree grows to a very considerable height: the trunk is strait; the bark rough and reddish; the wood yellowish, and strongly scented of turpentine: the leaves grow from little tubercles on the bark of the branches, two together; they are united close at the base, but separate afterwards, hollowed inwards, pointed at the ends, very narrow, like rushes, and eight inches long: the cones or fruit are large, of a turbinated figure, and composed of a very beautiful arrangement of squammæ.

It is a native of Italy. C. Bauhine calls it, Pinus sativa. The kernels of this fruit are esculent and sweet as an almond; they used to be kept in the shops as restoratives, but they are neglected at this time.

The other species are, 1. The great, long-leaved, swamp Pine of America. 2. The common, wild Pine. 3. The slender-fruited, wild Pine. 4. The sea Pine. 5. The lesser sea Pine. 6. The low Pine, with green iuli. 7. The very slender-leaved Pine, with purple iuli. 8. The Pine, with erect cones.

ABIES.

THE calyx of the male flowers is a gemma; there is no corolla: the stamina are numerous, and the antheræ are furnished with a squammula in the upper part. In the female flowers, the squammulæ of the strobilus each contain two flowers; there is no corolla: the pistil is single, and the seed is lodged in a membranaceous ala.

Abies foliis solitariis apice acuminatis.
The Abies, with solitary leaves acuminated at the point.

The Common Fir.

The tree is tall; the bark reddish or browniſh, and the wood yellowish and resinous: the branches grow regularly; the leaves are of a pale green, narrow, and pungent at the ends: the fruit is a cylindric cone of six inches, or more, in length; these grow on the extremities of the branches, and hang downwards.

It is common in France and Italy. C. Bauhine calls it, Abies conis deorsum spectantibus; others, Picea.

The other species of Abies are are, 1. The yew-leaved Abies, with the cones standing upwards. 2. The long-leaved Abies. 3. The smaller, pectinated, Virginian Abies. 4. The lesser coned Abies. 5. The yew-leaved Abies, with the leaves white underneath. 6. The short-leaved Abies.

CUPRESSUS.

THE calyx of the male flowers is a ſquamma of an amentum; there is no corolla: the antheræ are four, and ſeſſile, and have no filaments. In the female flowers, the calyx contains two, and is a ſquamma of a ſtrobilus; there is no corolla: there are hollowed points in the place of ſtyles; the ſeed is angular.

Cupreſſus foliis imbricatis erectis. The Cypreſs-tree.
The Cupreſſus, with imbricated, erect leaves.

The root is ſpreading; the tree grows to a conſiderable height; the trunk is thick and ſtrait, the bark brown, the wood firm and ſcented; from the middle to the top it is full of branches: the leaves are of a duſky green, and of an imbricated ſtructure: the fruit is of the ſize of a ſmall walnut, of an oval figure, and full of cracks on the ſurface: it's colour is a duſky brown; it's taſte reſinous.

It is a native of the Iſlands of the Archipelago. C. Bauhine calls it, ſimply, Cupreſſus.

The other ſpecies are, 1. The thicker-leaved Cupreſſus. 2. The ſmaller-fruited Cupreſſus. 3. The acacia-leaved Cypreſs.

THUYA.

THE calyx of the male flower is a ſquamma of an amentum; there is no corolla: the ſtamina are four. In the female flower, the calyx is ſquamma of a ſtrobilus, and contains two flowers; there is no corolla: the piſtil is ſingle, and the ſeed is ſurrounded with a membranaceous ala.

Thuya ſtrobilis lævibus, ſquammis obtuſis. The Arbor Vitæ.
The Thuya, with ſmooth ſtrobili, and obtuſe ſquammæ.

The root is ſpreading; the tree grows to a moderate height: the trunk is erect and knotty; the bark is of a reddiſh grey; the wood reddiſh, firm, and reſinous: the branches ſpread horizontally: the leaves are divided into many parts, oblong, compreſſed, and ſquammoſe; they are of a bright green, and of a ſtrong and diſagreeable ſmell: the flowers are ſmall and yellowiſh; the fruit is a ſmall, oblong cone.

It is a native of North America. C. Bauhine calls it, Thuya Theophraſti; others, Arbor vitæ.

There is but one other known ſpecies of this genus, that is, the Chineſe Arbor vitæ.

THELIGONIUM.

THE calyx of the male flower is bifid; there is no corolla: the ſtamina are twelve. There is no corolla to the female flower: the calyx is bifid, and the piſtil ſingle: the fruit is a coriaceous capſule, containing only a ſingle cell, and in it only one ſeed.

This genus comprehends the Cynocrambe of Tournefort. There is but one known ſpecies of it.

THELIGONIUM.

The root is compoſed of a cluſter of white fibres: the ſtalks are numerous, and a foot and a half long; they are round jointed and procumbent, ſmooth on the ſurface, hollow and brittle: the leaves grow two or three at a joint, but not oppoſite, but all on one ſide; they are oblong, of a deep green, flattiſh, ſtinking, when bruiſed, and one of them at each joint uſually ſtands on a longer pedicle than the others: the flowers are numerous, very ſmall; they ſtand in cluſters at the joints of the ſtalk.

It is a native of France. C. Bauhine calls it, Cynocrambe Dioſcoridis; others, Alſine parietariæ foliis.

ACALYPHA.

THE calyx of the male flower conſiſts of three, or of four, leaves; there is no corolla: the ſtamina are from eight to ſixteen in number. In the female flower, the calyx is compoſed of three leaves; there is no corolla: the ſtyles are three; the fruit is a trioccous capſule, containing three cells, with a ſingle ſeed in each. The iuli of the male flowers, as alſo the female ones, which are ſucceeded by tricocous fruits, both ſtand in the alæ of the leaves.

Theſe characters ſufficiently diſtinguiſh the Acalypha, without a farther deſcription.

CROTON.

THE calyx of the male flower is cylindric, and indented in five places at the edge: the corolla conſiſts of five petals; and the ſtamina are from ten to fifteen. The calyx of the female flower is formed of ſeveral leaves; there is no corolla: the ſtyles are three, and bifid; the fruit is a capſule, containing three cells, and in each a ſingle ſeed.

This genus contains the Ricinoides and Heliotropium tricoccum of authors.

Croton foliis rhombeis repandis, capſulis pendulis, caule herbaceo.

The herbaceous Croton, with rhombic leaves, and pendulous capſules.

The Turnſole Plant.

The root is oblong and ſlender; the plant riſes to ten or twelve inches: the ſtalk is round and green, but ſomewhat hoary and ramoſe: the leaves ſtand on oblong, hollowed pedicles; they are oblong, and bend backwards; they are rugoſe, of a duſky green, and ſomewhat hoary, ſoft to the touch, and ſinuated: the male flowers are ſmall and yellow, and ſtand in cluſters on ſhort pedicles: the fruit, which ſucceeds the female flowers in the alæ of the leaves, is affixed to an oblong pedicle; it is tricoccous, of a greyiſh colour, and ſomewhat rough ſurface. Theſe fruits, while freſh, rubbed on cloth, give it a green colour, which almoſt inſtantly turns to a fine blue.

The plant is a native of France. C. Bauhine calls it, Heliotropium tricoccum. The Succus Lacmus, or Turnſole, uſed in dying and painting, is prepared from this plant.

RICINUS.

THE calyx of the male flower is divided into five parts; there is no corolla: the ſtamina are numerous. In the female flower, the calyx is divided into three parts; there is no corolla: the ſtyles are three, and are bifid: the fruit is a capſule, containing three cells, and in each of them one ſeed.

Ricinus foliis peltatis, ſerratis, petiolis glanduliferis.

The peltated, ſerrated-leaved Ricinus, with glanduliferous pedicles.

The Common Ricinus, or Palma Chriſti.

The root is long, thick, white, and fibrated: the plant grows to five or ſix feet high; the ſtalk is round, thick, hollow, ſtriated, jointed, and of a bluiſh-green on the lower part, and a purpliſh colour toward the top: the leaves are very large, palmated, and divided at the edge into ſix or ſeven parts: the flowers are ſmall and ſtamineous, but they ſtand in a long beautiful ſpike, on a peculiar peduncle: the capſules are rough on the ſurface; the ſeeds oblong.

It is a native of the Eaſt. C. Bauhine calls it, Ricinus vulgaris; others, Palma Chriſti.

The other ſpecies are, 1. The ſmaller, American Ricinus. 2. The deeply, divided-leaved, Ceylon Ricinus. 3. The larger-fruited Ricinus. 4. The rounder-leaved Ricinus.

JATROPHA.

THE male flower has no calyx: the corolla is of an infundibuliform ſhape, and is formed of a ſingle petal: the ſtamina are ten in number, and are alternately ſhorter. The female flower has no calyx: the corolla is of the roſaceous form, and conſiſts of five petals: the ſtyles are three in number, and are bifid: the capſule contains three cells, and in each a ſingle ſeed.

This genus comprehends the Manihot of Tournefort, and the Juſſievia of Houſton.

Jatropha foliis digitatis.
The digitated-leaved Jatropha. **The Caſſada Plant.**

The root is oblong and very thick; the plant grows to ſix or eight feet high: the ſtem is firm, but hollow, and full of pith: the leaves are digitated, or compoſed each of five or ſeven oblong narrow portions, uniting only at the baſe, where they are affixed to a long rib; they are ſmooth, and of a deep green: the flowers are ſmall and yellow.

It is a native of many parts of America, where the natives make a kind of bread from the root, which is very nouriſhing. C. Bauhine calls it, Manihot Indorum foliis Cannabinis; others, Yucca and Caſſavi.

The other ſpecies of Jatropha are, 1. The prickly, vine-leaved Jatropha. 2. The large, elm-leaved Jatropha. 3. The narrower, elm-leaved Jatropha. 4. The climbing, betony-leaved Jatropha. 5. The little, germander-leaved, American Jatropha.

STERCULIA.

THE calyx of the male flowers is divided into five parts; there is no corolla: the ſtamina are fifteen. The calyx of the female flower is alſo divided into five parts; there is no corolla: the germen ſtands upon a column: the fruit is a capſule, containing ſeveral cells, and in each of theſe are ſeveral ſeeds.

Theſe characters ſufficiently diſtinguiſh the Sterculia, without a farther deſcription.

HURA.

THE male flowers are arranged into an imbricated amentum: the antheræ are ſeſſile, and adhere to the amentum. The female flower has no calyx, nor any corolla: the ſtyle is of an infundibuliform ſhape: the ſtigma is divided into twelve parts: the fruit is a capſule formed of twelve ſeparate cells, in each of which is a ſingle ſeed.

Of this genus there is but one known ſpecies.

HURA. **The Sand Box-tree.**

The root is ſpreading; the tree grows to a moderate height; the trunk is thick; the bark ſmooth and brown, and the wood whitiſh: the leaves are ſeven or eight inches long, five broad, and placed on long pedicles; they are of a beautiful green, and finely ſerrated: the fruit is two inches in diameter, and burſts into twelve lunulated parts, in each of which is a ſingle ſeed.

It is a native of America. Authors call it Hura, and Arbor crepitans.

Claſs the Twenty Firſt. Order the Eighth.

MONÆCIA SYNGENESIA.

Plants having ſeparate male and female flowers on the ſame plant, and thoſe Syngeneſious.

TRICHOSANTHES.

THE calyx of the male flower has five indentings at the edge: the corolla is divided into five ſegments, and is ciliated; the ſtamina are three. The calyx of the female flower is indented in five places: the corolla is alſo formed of a ſingle petal, and divided into five ſegments, and ciliated: the ſtyle is divided into three parts: the fruit is an oblong apple.

This genus comprehends the Anguina of Micheli.

Trichoſanthes foliis cordato-ſagittatis ſerratis.
The cordato-ſagittated, ſerrated-leaved Trichoſanthes.

The root is creeping; the plant riſes to a conſiderable height, if there are things near to ſupport it: the ſtalk is ſlender and angular: the tendrils are long, ſpirally contorted, and green; the leaves are large, cordated at the baſe, oblong, and terminate in a ſharp point; they are ſerrated, and of a duſky brown: the flowers are moderately large, white, and edged with a vaſt number of long hairs or filaments: the fruit is oblong, and pointed at the end.

It is a native of the Eaſt Indies. Van Rheede calls it, Toti pira.

The other ſpecies are, 1. The great, roundiſh-leaved Trichoſanthes. 2. The angulated-leaved Trichoſanthes.

MOMORDICA.

THE calyx of the male flower is divided into five ſegments: the corolla conſiſts of a ſingle petal, and is divided into five ſegments; the ſtamina are three. The calyx of the female flower is divided into five parts: the corolla is formed of a ſingle petal, and divided into five ſegments; the ſtyle is divided alſo into three parts: the fruit is an apple, burſting open with great elaſticity.

This genus comprehends the Momordica and Luffa of Tournefort, and the Elaterium of Boerhaave.

Momordica foliis cordatis integris plicato-dentatis. **Wild Cucumber.**
The cordated, plicato-dentated-leaved Momordica.

The root is a foot long, and two or three inches in diameter, white, fleſhy, bitter, and nauſeous: the ſtalks are numerous and procumbent; they are angulated, rough, and thick: the leaves are roundiſh, but ſomewhat oblong, and pointed, aurited at the baſe, and three inches, or more, in length: the flowers are large, yellow, with greeniſh veins, and ſtand at the alæ of the leaves; the fruit is of a cylindric form and rough ſurface, about two inches long, and, when ripe, it burſts with violence on the lighteſt touch, ſending out every way, ſometimes to five feet high, a corroſive liquor.

It is common in France. Authors call it, Cucumis ſylveſtris, and Cucumis aſininus; but very improperly, as it is not at all of the cucumber kind. The fæculæ of the juice of the fruit of this plant is the Elaterium of the ſhops, a violent purge.

The other ſpecies are, 1. The angular-fruited Momordica, with ſmooth, roundiſh leaves, called the round-leaved, male, creeping Balſam. 2. The divided-leaved Momordica, called the reticulated, Egyptian Cucumber or Luffa. 3. The ſhort-fruited, vine-leaved Momordica. 4. The long, yellow-fruited, vine-leaved Momordica.

CUCUMIS.

THE calyx of the male flower is divided into five ſegments: the corolla is formed of a ſingle petal, and divided into five ſegments alſo; the ſtamina are three. The calyx of the female flower is divided into five parts: the corolla is formed of a ſingle petal, and divided into five ſegments; the piſtil is trifid: the ſeeds have no tumid edge.

This genus comprehends the Melo, Colocynthus, and Anguria of authors.

Cucumis foliis multifidis, pomis globoſis glabris.
The multifid-leaved Cucumber, with ſmooth, globoſe fruit. **Colocynth.**

The root is fibrous: the ſtalks are ſtriated, rough, and procumbent, but they grow to a conſiderable length: the leaves ſtand ſingly at the joints; they are placed on long pedicles, and are large, rough, hairy, and divided into a number of ſegments: the flowers are large and yellow; the fruit is round, and of the bigneſs of a man's fiſt, green at firſt, but, when ripe, of a pale, yellowiſh colour: the pulp of this fruit is the Colocynth or Coloquintida of the ſhops, a violent cathartic.

It is a native of the Eaſt. C. Bauhine calls it, Colocynthis fructu rotundo minore.

The other ſpecies of Cucumis are, 1. The common Cucumber. 2. The round-leaved, Egyptian Cucumber. 3. The common Melon. 4. The ſmall-fruited, trifoliate, American Citrul. 5. The American Citrul, with echinated, eſculent fruit. 6. The ſmall, round-fruited, cordated-leaved Citrul. The varieties of the Melon-kind are almoſt endleſs, but they are not to be accounted as ſpecies by the botaniſt. They are all owing to accident or culture.

CUCURBITA.

THE calyx of the male flower is divided into five parts: the corolla is compoſed of a ſingle leaf, divided into five ſegments; the ſtamina are three. The calyx of the female flower has alſo five indentings at the edge: the corolla is compoſed of a ſingle petal, and is divided into five ſegments; the piſtil is trifid: the fruit is an apple, and the ſeeds have a tumid edge.

This genus comprehends the Pepo, and the Melopepo of Tournefort.

Cucurbita ſeminibus obſolete bicornibus.
The Cucurbita, with obſoletely bicornate ſeeds.

The root is fibrous: the plant, if ſupported, grows to a conſiderable height: the ſtalks are moderately thick, angulated, and rough; the leaves are very large, often meaſuring a foot and a half in diameter; they are of a roundiſh figure, ſoft to the touch, downy, ſomewhat divided at the edges, and placed on long furrowed pedicles: the flowers are large, ſnow-white, and hairy within, and ſomewhat hairy alſo on the outſide; the fruit is very large and long.

It is a native of many parts of America. C. Bauhine calls it, Cucurbita oblonga flore albo.

The other ſpecies are, 1. The great-fruited, rough-leaved Cucurbita. 2. The little, rough-leaved Cucurbita. 3. The common Pompion or Pumpkin. 4. The little, yellow-fruited Pompion. 5. The compreſſed Melopepo. 6. The great, rough-leaved Melopepo. 7. The clypeiform Melopepo. 8. The common Citrul, or divided-leaved Cucurbita.

SICYOS.

THE calyx of the male flower has five indentings at the edge: the corolla is formed of a ſingle petal, divided into five ſegments; the ſtamina are three. The calyx of the female flowers is divided by five indentings at the edge: the corolla is formed of a ſingle petal, divided into five ſegments; the ſtyle is trifid: the fruit is a berry, containing only a ſingle ſeed.

This genus comprehends the Sicyoides of Tournefort, and Bryonoides of Dillenius.

Sicyos foliis angulatis.
The angulated-leaved Sicyos.

The root is compoſed of a multitude of white fibres: the ſtalks are ſlender, angulated, and climbing; the leaves are large and angulated, of a deep green, and placed on moderately long pedicles: the flower is ſmall; the fruit is rough, or echinated on the ſurface, and contains only a ſingle ſeed.

It is a native of America. Dillenius calls it, Bryonoides flore et fructu minore.

The other ſpecies are, 1. The laciniated-leaved Sicyos. 2. The larger-fruited Sicyos.

BRYONIA.

THE calyx of the male flower is divided by five indentings at the rim: the corolla is formed of a ſingle petal, and divided into five ſegments; the ſtamina are three. The calyx of the female flower is alſo dentated: the corolla is formed of a ſingle petal, divided into five ſegments: the ſtyle is trifid; the fruit is a roundiſh berry.

Bryonia foliis palmatis, utrinque calloſe ſcabris. White Bryony.
The Bryonia, with palmated leaves, ſcabrous on both ſides.

The root is of an enormous ſize, often two feet long, and ſix or eight inches in diameter, of a whitiſh colour, and diſagreeable ſmell: the ſtalks are ſlender, angulated, and, when ſupported, grow to a great height: the leaves are broad and palmated, of a pale green colour, and very rough to the touch: the flowers are very ſmall and green; the fruit is a round berry, red, when ripe.

It is common in our hedges. The root is uſed in ſome compoſitions as an antihyſteric. Authors call the plant Bryonia alba, and Bryonia alba baccis rubris.

The other ſpecies are, 1. The larger-fruited, deeply, divided-leaved Bryony of Ceylon. 2. The ſmaller-fruited, laciniated-leaved Briony. 3. The ſmooth-leaved, yellow-flowered, African Bryony. 4. The fig-leaved Bryony. 5. The olive-fruited Bryony. 6. The ſmooth, angulated leaved, American Bryony. 7. The rough, angulated-leaved, American Bryony. 8. The angulated-leaved Bryony, with very ſmall, black fruit.

TREVILLEA.

THE calyx of the male flower is divided into five ſegments: the corolla is formed of a ſingle petal, divided alſo into five ſegments: the ſtamina are three. The calyx of the female flower is divided into five ſegments: the corolla is formed of a ſingle petal, and divided alſo into five ſegments: the ſtyle is trifid; the fruit is a berry, ſurrounded with a cortical ſubſtance.

This genus comprehends the Nhandirolea of Plumier. It's characters ſufficiently diſtinguiſh it, without a farther deſcription.

Claſs the Twenty Second. Order the Tenth.

MONÆCIA GYNANDRIA.

Plants with ſeveral male and female flowers on the ſame plant, and with the ſtamina in the male flowers ſituated upon the rudiments of a ſtyle.

ANDRACHNE.

THE calyx of the male flower is compoſed of five leaves: the corolla is formed of five petals: the ſtamina are five, and grow upon the rudiments of a ſtyle. The calyx of the female flower is formed of five leaves; there is no corolla: the ſtyles are three:

three: the fruit is a capsule containing three cells; with two seeds in each. This genus comprehends the Telphoides of Tournefort and Dillenius.

Of this genus there is but one species, and that is too fully distinguished by it's characters, to need any farther description. It is a procumbent, oriental plant.

Class the Twenty Second.

DIOECIA.

Plants which have the male and female flowers on separate plants of the same species.

OF these some have only a single stamen, some two, some three, and so on to ten; others have twenty, others very numerous stamina, and others are monadelphous, syngenesious, and gynandrious, according to the before established distinctions. They are therefore, according to these obvious characters, to be arranged into several orders.

Class the Twenty Second. Order the First.

DIOECIA MONANDRIA.

Plants that have the male and female flowers on separate plants, and only one anthera.

NAIAS.

THE calyx of the male flower is cylindric, and divided into two parts: the corolla is divided into four segments; there is no stamen: the anthera is single, oblong, and erect. The female flower has no calyx nor corolla; the pistil is single, and the fruit is an oval capsule.

This genus comprehends the Fluvialis of Vaillant and Micheli.

Naias foliis latioribus serratis.
The broader and serrated-leaved Naias.

The root is fibrous and whitish; the plant grows to a foot and a half long; it floats obliquely in the water, seldom standing quite erect: the stalk is round, jointed, ramose, and has some short, robust spines placed at distances on it: the leaves stand usually three at a joint; they are more than an inch long, about a sixth of an inch broad, of a shining surface, and deeply serrated at the edges: the flowers are moderately large, and stand singly on pedicles of half an inch long, arising from the alæ of the leaves.

It is common in fresh waters in many parts of Europe. Ray calls it, Potamogeton sargazo simile, lucens, foliis margine dentatis.

There is but one other known species, which is the narrow-leaved Naias.

Class the Twenty Second. Order the Second.

DIOECIA DIANDRIA.

Plants which have the male and female flowers on separate plants, and have two stamina.

VALLISNERIA.

THE calyx of the male flower is a spatha, divided into two parts: the spadix is covered with floscules; the corollæ are tripetalous. The calyx of the female flower is a spatha, divided into two parts, and containing only a single flower: the

perianthium is divided into three ſegments, and ſtands above the germen: the ſtyles are three; the fruit is a capſule containing a ſingle cell, in which are ſeveral ſeeds.

This genus comprehends the Valliſneria and Valliſneroides of Micheli.

VALLISNERIA.

The root is oblong, white, creeping, and fibrated: the leaves are numerous, very long, narrow, and obtuſely pointed; they riſe in cluſters, eight or ten together from the root: the ſtalk which ſupports the flower riſes from amidſt theſe; it is naked, ſlender, very long, and ſpirally contorted in a beautiful manner like a cork-ſkrew: the flower is ſingle, and it's tube very long; it is of a beautiful purple: by the untwiſting of the ſtalk, the flower gets to the top of the water, almoſt from any depth.

SALIX.

THE male flowers are arranged into an amentum or catkin, and their calyx is the ſquamma of that amentum; there is no corolla, but there is a nectariferous gland at the baſe. The calyx of the female flower is alſo a ſquamma of the amentum; there is no corolla: the ſtyle is bifid: the fruit is a capſule formed of two valves, and containing only one cell, in which there are ſeveral ſeeds furniſhed with down.

Salix foliis ſerratis ovatis acutis glabris.
The ſerrated, oval, and acute-leaved Salix.

The Bay-leaved Willow.

The root is large and ſpreading; the leaves are the broadeſt of all the willow-kind; they are two inches long, and near an inch and a half broad, ſmooth, very like thoſe of the common bay in ſhape, and ſerrated at the edges; of a bright ſtrong green on the upper ſurface, and of a paler colour below: the tree grows to a moderate ſize: the bark of the trunk is rough, and full of cracks; that of the young ſhoots is ſmooth, and of a pale yelloviſh-green: the flowers hang from the branches, in long, whitiſh, green catkins.

It is a native of England, but is not frequent. Ray calls it, Salix folio laureo ſeu lato glabro odorato.

The other ſpecies of Salix are, 1. The common, white-leaved, tree Willow. 2. The red-twigged Salix, with dark green, not ſerrated leaves. 3. The long, crenated-leaved, yellow Willow. 4. The almond-leaved, aurited Salix. 5. The very long and narrow, whitiſh-leaved Salix. 6. The low, narrow-leaved Salix. 7. The oblong, hoary, acute-leaved Salix. 8. The brittle-ſtalked, long-leaved Salix. 9. The roundiſh, ſilvery-leaved Salix. 10. The low, erect, broad-leaved Salix. 11. The broad-leaved, dwarf, creeping Salix. 12. The round-leaved, dwarf, mountain Salix, with the leaves grey underneath. 13. The dwarf, alder-leaved Salix. 14. The dwarf Salix, with leaves hoary on both ſides. 15. The dwarf Salix, with leaves ſmooth on both ſides. 16. The dwarf, hoary, flax-leaved Salix. 17. The dwarf Salix, with ſhort leaves. 18. The narrow and ſmooth-leaved, dwarf Salix. 19. The ſerpyllum-leaved, gloſſy, dwarf Salix. 20. The roundiſh-leaved Salix, called the common Sallow. 21. The oblong, pointed-leaved Sallow. 22. The very broad-leaved, water Sallow. 23. The ſage-leaved, auriculated, Portugal Salix. 23. The Babylonian or drooping-branched Salix. 24. The common Oſier. 25. The long and broad-leaved Salix. 26. The long, narrow, deep green-leaved Salix. 27. The firm and ſcarce ſerrated-leaved Salix. 28. The ſmooth, lanceolated-leaved, ſerrated Salix. 29. The round, ſilvery-leaved Salix.

Class the Twenty-second. Order the Third.

DIOECIA TRIANDRIA.

Plants that have the male and female flowers on separate plants, and have three stamina.

OSYRIS.

THE calyx of the male flower is divided into several segments: there is no corolla. The calyx of the female flower is divided into three segments: there is no corolla, nor any style: the stigma is roundish, and the fruit is a drupe, containing only one cell.

This genus comprehends the Casia of Tournefort.

Osyris foliis oblongis acutis.
The oblong, acute-leaved Osyris.

The root is divaricated, tough, and fibrated: the shrub grows to three feet high, and is very ramose: the bark of the trunk is brown; the young shoots are greenish, striated, and tough: the leaves are oblong, narrow, and pointed at the ends; they somewhat resemble those of the linaria: the flowers are small, and of a greenish-yellow colour: the fruit is a large, red berry.

It is a native of Italy. C. Bauhine calls it, Osyris fruteſcens baccifera; others, Casia poetica.

The other species are, 1. The tall, myrtle-leaved, Spanish Osyris. 2. The obtuse-leaved, Siberian Osyris.

Class the Twenty-second. Order the Fourth.

DIOECIA TETRANDRIA.

Plants which have the male and female flowers on separate plants, and have four antheræ.

VISCUM.

THE calyx of the male flower is divided into four segments: there is no corolla, nor any stamina: the antheræ are four in number, and grow to the calyx. The calyx of the female flower is composed of four leaves, and is situated above the germen: there is no corolla, nor any style: the fruit is a round berry, containing a single seed, which is of a cordated form.

Of this genus there is but one known species.

VISCUM. **Mistletoe.**

The stem is round, robust, half an inch in diameter, and covered with a yellowish bark: the whole plant grows to a foot and a half, or more, in height, and spreads to nearly as much in diameter, usually affecting a roundish form in the whole: the stem divaricates, at a small height from it's base, into several branches, and these again into others, very numerous, and, in general, dichotomously: the leaves are oblong, obtuse, thick, and of a yellowish-green colour; they are about an inch and a half in length, and near half an inch in breadth: the flowers are minute and yellowish; the berries large, and full of a viscous juice; they are naturally of a snow-white colour, but sometimes are red.

It grows on the trunks and branches of trees, as the apple, plum, white thorn, &c. in our gardens and hedges. C. Bauhine calls it, Viscum baccis albis.

It is esteemed a good medicine in epilepsies and other nervous disorders.

HIPPOPHAE.

THE calyx of the male flower is divided into two parts, and there is no corolla. The calyx of the female flower is alſo divided into two parts: there is no corolla: the ſtyle is ſimple: the fruit is a berry, containing a ſingle ſeed.

This genus comprehends the Rhamnoides of Tournefort and others.

Hippophae foliis integerrimis.
The undivided-leaved Hippophae.

Sallow Thorn, or ſea Buck-thorn.

The root is ſpreading and fibrated: the ſhrub riſes to ten feet high: the trunk is covered with a brown bark; the branches with a paler, or greeniſh, one: the leaves are very numerous, oblong, narrow, undivided at the edges, of a duſky green colour on the upper ſide, and of a ſilvery white underneath: the flowers are ſmall and greeniſh; the berries large, round, and yellow.

It is frequent in the Iſle of Ely, and on ſome of the Eſſex ſhores. C. Bauhine calls it, Rhamnus ſalicis folio anguſto, fructu flaveſcente.

The other ſpecies are, 1. The larger-leaved Hippophae. 2. The ſerrated-leaved Hippophae.

MYRICA.

THE male flowers are arranged into an amentum: the calyx is a ſquamma of a lunated figure: there is no corolla. The female flowers are alſo arranged into an amentum: the calyx is a ſquamma of a lunated figure: there is no corolla: the ſtyles are two: the fruit is a berry, containing only a ſingle ſeed.

This genus comprehends the Gale of Tournefort and others.

Myrica foliis lanceolatis, fructu ſicco.
The lanceolated-leaved Myrica, with a dry fruit.

The root is ſpreading, brown, and fibrated: the ſhrub grows to three feet high: the branches are tough, ſlender, and brown: the leaves are ſmall, lanceolate, and of a duſky green colour: the flowers are of a pale whitiſh colour.

It is a native of moſt parts of Europe. Van Royen calls it, Myrica mas et fœmina.

The other ſpecies is the Myrica of America, with ſucculent fruit, or the berry-bearing Myrica.

MORUS.

THE calyx of the male flower is divided into four parts, and there is no corolla. The calyx of the female flower is compoſed of four leaves: there is no corolla: the ſtyles are two: the calyces become ſucculent and baccated, and each contains a ſingle ſeed.

Morus foliis cordatis hiſpidis.
The cordated, hiſpid-leaved Morus.

The common Mulberry-tree.

The root is ſpreading and fibrated: the tree grows to a very conſiderable ſize: it's trunk is thick, and uſually ſomewhat tortuous; it's head diffuſe, and the branches thick and irregular: the leaves are numerous, moderately large, of a bright green colour, broadeſt at the baſe, where they are ſomewhat cordated, and ſerrated at the edges; they terminate in a ſharp point, and are ſomewhat hairy: the flowers are ſmall and greeniſh: the fruit oblong, large, and green at firſt, afterwards red, but black, when ripe.

It is a native of China, and of ſome parts of Italy. C. Bauhine calls it, Morus fructu nigro.

The other ſpecies are, 1. The obliquely-cordated, ſmooth-leaved Mulberry, with white fruit. 2. The leſſer-fruited, ſmoother-leaved Mulberry; and, 3. The laciniated-leaved Mulberry.

Claſs

Class the Twenty Second. Order the Fifth.

DIOECIA PENTANDRIA.

Plants with the male and female flowers on separate plants, and with five stamina in the flower.

ANTIDESMA.

THE calyx of the male flower is composed of five leaves: there is no corolla: the antheræ are bifid. The calyx of the female flower is also composed of five leaves: there is no corolla: the stigmata are five: the fruit is a cylindric berry, containing only one seed.

These characters sufficiently distinguish the Antidesma, without a farther description.

PISONIA.

THE calyx of the male flower is formed of a single leaf, divided into five segments: the corolla is of an infundibuliform shape, and is divided also into five segments at the rim. The calyx of the female flower is formed also of a single leaf, divided into five segments, and is situated on the germen: the corolla is of an infundibuliform shape, and divided into five segments: the style is simple: the fruit is a capsule, formed of three valves, containing only one cell, and in it a single seed.

These characters sufficiently also distinguish the Pisonia, without a farther description.

PISTACHIA.

THE male flowers are arranged into an amentum: the calyx is divided into five segments: there is no corolla. The female flowers are distinct: the calyx is divided into three segments: there is no corolla: the styles are three, and the fruit is a drupe, containing a single kernel.

This genus comprehends the Terebinthus and Lentiscus of Tournefort and others.

1. *Pistachia foliis impari-pinnatis, foliolis ovato-lanceolatis.* **The Turpentine-tree.**

The pinnated-leaved Pistachia, with ovato-lanceolate pinnæ.

The root is brachiated: the tree is an ever-green, and grows to the size of our pear-trees: the bark is brown, thick, and full of cracks: the branches are numerous: the leaves stand alternately, and are pinnated; the pinnæ stand opposite, on the rib, and are rigid, firm, of a strong green colour, and not unlike the bay-leaf, but more obtuse: the male flowers are small, and purplish; the female flowers are very small, and greenish: the fruit is roundish, and contains, within a membranaceous shell, a single kernel.

It is a native of Cyprus and Chios, and of some parts of Europe. The Chio Turpentine of the shops flows naturally from it's trunk. C. Bauhine calls it, Terebinthus vulgaris.

2. *Pistachia foliis impari-pinnatis, foliolis subrotundis.* **The Pistachia-nut-tree.**

The pinnated-leaved Pistachia, with roundish pinnæ.

The root is spreading: the tree grows to a considerable size: the trunk is thick, and covered with a brown, cracked bark: the branches are numerous and spreading: the leaves are pinnated, and terminated by an odd pinna; the pinnæ are large, roundish, nervous, and not placed exactly overagainst one another on the rib: the male flowers are arranged into loose catkins; the female are very small, and are succeeded by the Pistachia-nuts we eat.

It is a native of Perſia, Arabia, and Syria. C. Bauhine calls it, Terebinthus Indica Theophraſti.

The other ſpecies are, 1. The ſhorter-leaved Turpentine-tree. 2. The ſmall, blue, eſculent-fruited Piſtachia. 3. The trifoliate Piſtachia. 4. The American Turpentine-tree. 5. The Piſtachia, called the common Lentiſk-tree. 6. The narrow-leaved Lentiſk-tree.

CERATONIA.

THE calyx of the male flower is divided into five parts: there is no corolla: the antheræ are didymous. The calyx of the female flower has five tubercles: there is no corolla: the ſtyle is ſingle: the fruit is a legumen, or pod, divided by ſeveral ſepta.

This genus comprehends the Siliqua of Tournefort and others.

There is but one known ſpecies of it.

CERATONIA. The Carob-tree.

The root is brachiated, ſpreading, and fibrated: the tree grows to a very conſiderable ſize: the trunk is thick; the branches numerous and diffuſe: the leaves are very long, and pinnated; the pinnæ, or foliola, ſtand on pedicles, and are two inches and a half long, near as much in breadth, and of a duſky green colour, thick, firm, and venous: the flowers are ſmall and purpliſh: the fruit is a long, flatted, and crooked pod, containing an eſculent pulp round about the ſeeds.

It is a native of Italy, and of many parts of the Eaſt. C. Bauhine calls it, Siliqua edulis; others, Siliqua dulcis, and Carob.

SPINACHIA. Spinage.

THE calyx of the male flower is divided into five parts: there is no corolla. The calyx of the female flower is divided into four parts: there is no corolla: the ſtyles are four: the ſeed is ſingle, and is incloſed within the cup, which becomes indurated.

There is but one ſpecies of this genus, which is the common Spinach, or Spinage, of our gardens, too well known to need a deſcription. Authors have, however, divided this into two, under the name of male and female, though they have generally called the ſteril, or male plants, the female, and thoſe which bear ſeeds the male.

CANNABIS.

THE calyx of the male flower is divided into five parts: there is no corolla. The calyx of the female flower is compoſed of a ſingle leaf, undivided, and opening ſideways: there is no corolla: the ſtyles are two: the fruit is a nut, formed of two valves, and contained within the cup, which ſhuts upon it.

Cannabis foliis digitatis. Hemp.
The digitated-leaved Cannabis.

The root is fibrous and white: the plant grows to five or ſix feet high: the ſtalk is robuſt, thick, ſtriated, and compoſed of tough fibres: the leaves ſtand on long pedicles, and are compoſed of five or ſix parts, or divided to the baſe into ſo many ſegments; theſe are three inches long, narrow, of a duſky green colour, ſerrated at the edges, and terminate in a point: the flowers are ſmall and greeniſh: the fruit is the Hemp-ſeed we feed birds with.

It is a native of the Eaſt Indies, but it thrives very well in fields with us, where it is ſown for the ſake of it's ſtalks, from which, macerated and looſened into their fibres, Hemp is made. C. Bauhine calls it, Cannabis erratica and ſativa; others, Cannabis mas et fœmina, or Sterilis et ſeminifera.

HUMULUS.

THE calyx of the male flower is compoſed of five leaves: there is no corolla. The calyx of the female flower is compoſed of a ſingle leaf, obliquely patent and entire: there is no corolla: the ſtyles are two: the ſeed is ſingle, and is contained within the calyx, which becomes plane.

This genus comprehends the Lupulus of Tournefort and others.

There is but one known ſpecies of it.

HUMULUS. **The Hop plant.**

The root is fibrous: the plant, when properly ſupported, grows to a great height: the ſtalk is round, contorted, ſlender, purpliſh, and very tough: the leaves ſtand on pedicles, and are large, palmated, and divided into ſeveral ſegments at the edges; they are of a dark green colour, hiſpid, rough to the touch, and are often ſix inches in diameter: the male flowers are collected into looſe cluſters; the female ones are the Hops we uſe in brewing.

The plant is common wild in our hedges; but the value of it's female flowers dried makes it worth our people's while to cultivate it carefully for them. C. Bauhine calls it, Lupulus mas et fœmina. The young ſhoots are eſculent, and like aſparagus.

ZANONIA.

THE calyx of the male flower is compoſed of three leaves: the corolla is formed of a ſingle petal, and divided into five parts. The calyx of the female flower is alſo compoſed of three leaves, and the corolla formed of a ſingle petal, divided into five ſegments: the ſtyles are three: the fruit is a berry, containing three cells, and placed under the receptacle: there are two ſeeds in each cell.

Of this genus there is but one known ſpecies.

ZANONIA.

The root is fibrous: the plant climbs on any thing that is near it, and runs up to a vaſt height: the ſtalk is ſlender, but woody and firm: the leaves ſtand alternately, and on pedicles; they are five inches long, and three broad, of a bright green colour, and not divided at the edges; they terminate in a point: the flowers ſtand in long ſeries, at a diſtance from one another; they are moderately large, and of a greeniſh-white colour: the fruit is oblong, broadeſt at the extremity, conſiderably large, and red, when ripe.

It is a native of the Eaſt Indies. Van Rheede calls it, Penar-valli.

Claſs the Twenty Second. Order the Sixth.

DIOECIA HEXANDRIA.

Plants which have the male and female flowers on ſeparate plants, and ſix ſtamina in the male flowers.

GLEDISTIA.

THE male flowers are collected into an amentum, or catkin: the calyx is divided into four parts: the corolla conſiſts of four petals, and the antheræ are incumbent. The female flowers are alſo arranged in form of an amentum: the calyx is divided into four parts, and the corolla compoſed of four petals: the fruit is a legumen, or pod, with a pulpy matter in it, ſeparated by partitions.

Of this genus there is but one known ſpecies, which is eaſily diſtinguiſhed by theſe characters, without a farther deſcription. Linnæus, in his Hort. Cliffort. has called it, Cæſalpinoides foliis pinnatis et duplicato-pinnatis; others, Acacia abruæ foliis triacanthos, ſeu triplici ſpina ad foliorum axillas.

SMILAX.

THE calyx of the male flower is compoſed of ſix leaves: there is no corolla. The ſtyles are three: the fruit is a berry, containing three cells, in each of which are two ſeeds.

Smilax caule ſpinoſo, baccis rubentibus. **Prickly**
The red-berried, prickly-ſtalked Smilax. **Bindweed.**

The root is long, creeping, and white: the plant, if it meets with trees or buſhes to climb upon, grows to a great height: the ſtalk is ſlender, rigid, ſtriated, and contorted, and is armed all the way with ſtrong and ſharp ſpines: the leaves ſtand on moderately long pedicles, which are alſo prickly; they are large, oblong, and prickly, not only at the edges, but often along the ribs underneath: the flowers are ſmall and white; the berries round and red.

It is common in the hedges in Italy, and ſome parts of France. C. Bauhine calls it, Smilax aſpera fructu rubente; J. Bauhine, Smilax aſpera.

The other ſpecies are, 1. The leſs prickly, black-fruited Smilax. 2. The broad-leaved, prickly Smilax. 3. The oblong and nervous-leaved Smilax.

TAMUS.

THE calyx of the male flower is divided into ſix parts: there is no corolla. The calyx of the female flower is alſo divided into ſix parts, and there is no corolla: the ſtyle is trifid: the fruit is a berry, containing three cells, ſituated below the calyx, and in each cell containing two ſeeds.

This genus comprehends the Tamus of Tournefort, and the Bryonia nigra of other authors.

Tamus foliis cordatis. **Black**
The cordated-leaved Tamus. **Bryony.**

The root is large and tuberous, often ſix inches long, and three in diameter, black, on the outſide, white within, and full of a viſcous, acrid juice: the plant climbs up among buſhes to ten or fifteen feet high: it's ſtalk is green, tough, firm, and contorted: the leaves ſtand alternately; they are four inches long, and more than three broad near the baſe, whence they go off gradually to an obtuſe point, reſembling in the whole the ſhape of a heart, as uſually figured; they are of a ſhining ſtrong green colour, and perfectly ſmooth: the flowers are ſmall and greeniſh; the fruit a black berry.

The plant is common in our hedges. C. Bauhine calls it, Bryonia nigra racemoſa.

The other ſpecies are, 1. The larger-flowered Tamus. 2. The American Tamus, with palmated leaves.

RAIANA.

THE calyx of the male flower is divided into ſix ſegments: there is no corolla. the calyx of the female flower is divided alſo into ſix ſegments: there is no corolla: the ſtyles are three: the fruit is roundiſh, and has an oblique ala below the calyx.

This genus comprehends the Jan Raia of Plumier, and is ſufficiently diſtinguiſhed by theſe characters, without a farther deſcription.

DIOSCOREA.

THE calyx of the male flower is divided into ſix ſegments: there is no corolla. The calyx of the female flower is alſo divided into ſix ſegments, and there is no corolla: the ſtyles are three: the fruit is a compreſſed capſule, divided into three cells, in each of which there are two membranaceous ſeeds.

Dioſcorea foliis cordatis alternis, caule lævi.
The ſmooth-ſtalked Dioſcorea, with cordated, alternate leaves.

The root is tuberous, very large, divided into ſeveral parts, of a farinaceous ſubſtance, and eſculent: the ſtalk is woody, ſlender, weak, and ſupports itſelf by climbing upon any thing that is near it: the leaves ſtand ſingly at the joints; they are oblong, obtuſe at the point, cordated at the baſe, of a duſky green, and nervous: the flowers are ſmall and greeniſh; the fruit is a flatted capſule.

It is a native of Jamaica and other parts of America. Plumier calls it, Dioſcorea ſcandens folio tamni, fructu racemoſo.

Claſs the Twenty Second. Order the Seventh.

DIOECIA OCTANDRIA.

Plants which have the male and female flowers on ſeparate plants, and eight ſtamina in the male flower.

POPULUS.

THE male flowers are arranged into an amentum; the calyx is a lacerated lamina: the corolla is of a turbinated figure, oblique and undivided. The female flowers are arranged in an amentum, in the manner of the male ones, and the calyx and corolla are of the ſame ſtructure: the ſtigma is divided into four parts, and the fruit is a capſule, containing four cells, in each of which are ſeveral pappoſe ſeeds.

Populus foliis ſubrotundis, dentato-angulatis, ſubtus tomentoſis.
The Populus, with roundiſh, angulated leaves, woolly underneath. **The White Poplar.**

The root is ſpreading; the tree grows to a great height: it's trunk is thick, tolerably erect, and covered with a ſmooth, pale, whitiſh bark: the branches are not very numerous; the leaves are three inches long, and near as much in diameter; they are deeply dentated or angulated at the edges, and are of a dark green on the upper ſurface, and white and woolly underneath: the flowers are ſmall, and ſtand in long, looſe catkins: the fruit is a ſmall capſule.

It is common about watery places in moſt parts of Europe. C. Bauhine calls it, Populus alba.

The other ſpecies are, 1. The black Poplar. 2. The trembling-leaved Poplar, or Aſpin. The ſmaller-leaved white Poplar, and the American, great-leaved Poplar, are only varieties of the firſt ſpecies.

Claſs the Twenty Second. Order the Eighth.

DIOECIA ENNEANDRIA.

Plants which have the male and female flowers on ſeparate plants, and nine ſtamina in the male flower.

MERCURIALIS.

THE calyx of the male flower is divided into three parts; there is no corolla: the ſtamina are from nine to twelve: the antheræ are globoſe and didymous. In the female flower, the calyx is alſo divided into three parts, and there is no corolla: the ſtyles are two; the fruit is a dicoccous capſule, having two cells, and in each one ſeed.

Mercurialis caule brachiato, foliis glabris.
The Mercurialis, with a brachiated ſtalk, and ſmooth leaves.

The root is fibrous and white: the plant riſes to ten inches high: the ſtalk is thick, round, green, and jointed: the branches are numerous; the leaves are oblong, of a bright green, ſerrated, and terminate in a point: the male flowers are arranged in lax ſpikes: the female ones are ſucceeded ſingly by a teſticulated fruit.

It is common in many parts of England in dry places. C. Bauhine and others call it, Mercurialis mas et fœmina.

The other ſpecies are, 1. The common dog's Mercury, called Cynoerambe. 2. The hoary-leaved, ſhrubby Mercurialis. 3. The almond-leaved, ſhrubby Mercurialis. 4. The roundiſh-leaved Mercurialis.

HYDROCHARIS.

THE male flower has a ſpatha compoſed of two leaves: the calyx is divided into three parts: the corolla conſiſts of three petals, and the three interior ſtamina are ſtyliferous. The calyx of the female flower is divided into three parts, and the corolla conſiſts of three petals: the ſtyles are ſix: the capſule contains ſix cells, and in each of them a number of ſeeds; it's ſituation is under the receptacle of the corolla.

This genus comprehends the Stratiotes of Dillenius, the Morſus ranæ of Tournefort, and the Microleuco-nymphæa of Boerhaave. There is but one ſpecies of it.

HYDROCHARIS. **Little Water-Lily.**

The root is compoſed of a number of brown, thick, and long filaments: the leaves float on the ſurface of the water, and are of a round figure, thick, fleſhy, and of a duſky browniſh-green colour; they are about an inch and a half broad: the flowers ſtand ſingly on their pedicles, and are moderately large and white.

It is common in ditches. C. Bauhine calls it, Nymphæa alba minima.

Claſs the Twenty Second. Order the Ninth.

DIOECIA DECANDRIA.

Plants which have the male and female flowers on ſeparate plants, and ten ſtamina in the male flower.

CORIARIA.

THE calyx of the male flower is compoſed of five leaves: the corolla conſiſts of five petals, and is very like the cup: the antheræ are bipartite. In the female flower, the calyx is compoſed of five leaves: the corolla is like that of the male flower; the ſtyles are five: the fruit conſiſts of five ſeeds, incloſed in the petals, which become ſucculento-baccated.

Coriaria foliis ovato-oblongis. **Myrtle Sumach.**
The ovato-oblong-leaved Coriaria.

The root is divided, ſpreading, and fibrated: the ſhrub grows to four or five feet high: the trunk is half an inch in diameter, hollow, brittle, and filled with a light pith: the bark is greyiſh and ſpotted; the young ſhoots are ſquare: the leaves ſtand in pairs; they are oblong, and of a bright green: the flowers are ſmall and green; the antheræ blackiſh: the fruit is of the bigneſs of a pear.

It is a native of France. C. Bauhine calls it, Rhus myrtifolia Monſpeliana. It is ſaid to be a very great medicine in epilepſies. It's bark contains it's greateſt virtue.

NYSSA.

THE calyx of the male flower is divided into five ſegments; the corolla is alſo divided into five ſegments. The calyx and corolla in the female flower are alſo each divided into five ſegments: the ſtyle is ſingle; the fruit is a drupe, containing only one cell, and is placed under the receptacle.

It is a native of Virginia. Theſe characters ſufficiently diſtinguiſh it, without a farther deſcription.

CARICA.

THE male flower has ſcarce any calyx; the corolla is formed of a ſingle petal, and is of an infundibuliform ſhape, and divided into five ſegments at the edge: the filaments or ſtamina are ſituated within the tube of the corolla, and are alternately ſhorter. The calyx of the female flower has five indentings: the corolla conſiſts of five petals: the ſtigmata are five; the fruit is a berry, containing only one cell, in which are ſeveral ſeeds.

This genus comprehends the Papaya of Tournefort. There is but one ſpecies of it.

CARICA. The Papaw-tree.

The root is ſpreading: the tree, if it may be ſo called, grows to thirty feet, or more, in height; it's trunk is green, thick, naked, tender, and ſucculent, and, though often of the thickneſs of a man's thigh, may be cut down with a knife at one ſtroke: the leaves ſtand on long pedicles at the top, forming a very beautiful head; they are two feet, or more, in breadth, and are deeply divided into five or ſeven ſegments, ſo as to appear digitated: they are of a deep green on the upper ſurface, and of a paler green underneath; the flowers are yellow, moderately large, and hang in cluſters: the fruit is large, and, when ripe, yellow.

It is a native of America. C. Bauhine calls it, Papaya.

The male and female flowers in this ſometimes grow on the ſame plant, not on different ones, as is the uſual cuſtom; an inſtance of this we had in Lord Petre's ſtove.

KIGELLARIA.

THE calyx of the male flower is divided into five ſegments: the corolla conſiſts of five petals; there are five trilobous glandules: the antheræ are perforated. The calyx and corolla in the female flower are the ſame with thoſe of the male: the ſtyles are five: the fruit is a capſule formed of five valves, containing only one cell, and in it ſeveral ſeeds.

Theſe characters ſufficiently diſtinguiſh the Kigellaria, without any farther deſcription.

DATISCA.

THE calyx of the male flower is compoſed of five leaves; there is no corolla: the antheræ are long and ſeſſile. The calyx of the female flower is compoſed of five leaves; there is no corolla: the ſtyles are three: the fruit is a triangular, tricuſpidated capſule, containing only one cell, but in that a number of ſeeds, and it is pervious.

Theſe characters ſufficiently diſtinguiſh the Datiſca, without a farther deſcription.

Class the Twenty Second. Order the Tenth.

DIOECIA ICOSANDRIA.

ARUNCUS.

THE calyx of the male flower is divided into five segments at the extremity: the corolla is composed of five petals, and inserted into the calyx. The calyx of the female flower is divided into five segments: the corolla is composed of five petals: the germina are three, and the seeds three.

This genus comprehends the Barba capræ of Tournefort. There is but one known species of it.

ARUNCUS.

The root is oblong, thick, brown, and woody: the plant grows to four or five feet high: the stalks are striated, hollow, and smooth: the leaves are oblong, serrated at the edges, pointed at the end, and somewhat resemble those of the chesnut, and are placed several on the same rib: the flowers are small and white, and hang in long, slender spikes.

It is a native of many parts of Europe, but we have it not wild in *England*. C. Bauhine calls it, Barba capræ.

Class the Twenty Second. Order the Eleventh.

DIOECIA POLYANDRIA.

CLIFFORTIA.

THE calyx of the male flower is composed of three leaves; there is no corolla: the stamina are about thirty. The calyx of the male flower is composed of three leaves, and is situated upon the germen; there is no corolla: the styles are two; the fruit is a capsule, containing two cells, and in each a single seed.

These characters sufficiently distinguish the Cliffortia, without a farther description.

Class the Twenty Second Order the Twelfth.

DIOECIA MONADELPHIA.

JUNIPERUS.

THE male flowers are arranged into an amentum, and it's squammæ make the calyces; there is no corolla: the stamina are three. The calyx of the female flower is divided into three parts; the corolla is composed of three petals; the styles are three: the fruit is a berry, containing three seeds.

This genus comprehends the Juniperus and Cedrus of Tournefort, and the Sabina of Boerhaave.

Juniperus foliis basi adnatis, junioribus imbricatis, senioribus patulis. **Bermudas Cedar.**

The Juniperus, with the young leaves imbricated, the elder patulous.

The root is spreading; the tree grows to a considerable size in some places, though in others it is only a shrub: the leaves are small, short, of a lively green, and very numerous: those on the young shoots lie close and imbricated, those on the older stand open; this gives the appearance of two perfectly different kinds of leaves on the same plant: the fruit is a small, bluish-black berry, like that of our Juniper.

It is a native of most parts of America. Ray calls it, Juniperus major Americana.

The

The other ſpecies are, 1. The common Juniper. 2. The broader-leaved, mountain Juniper, with oblong berries. 3. The great, blue-berried Juniper. 4. The great, red-berried, ſhort-leaved Juniper. 5. The great, yellow-berried, cypreſs-leaved Juniper. 6. The great-berried, cypreſs-leaved Juniper. 7. The tall, Spaniſh Juniper, with large, black fruit. 8. The common Savin.

TAXUS.

THE calyx of the male flowers is compoſed of three leaves; there is no corolla: the ſtamina are numerous: the antheræ are peltated, and divided into eight ſegments. The calyx of the female flower is compoſed of three leaves, and there is no corolla; there is no ſtyle: the ſeed is ſingle, and is ſurrounded by an undivided, baccated calyx.

Of this genus there is but one known ſpecies.

TAXUS. **The Yew-tree.**

The root is brachiated and ſpreading; the tree grows to thirty feet, or more, in height: the trunk is uſually tortuous and irregular; the branches are numerous and ſpreading: the bark is of a pale reddiſh-brown; the wood firm, and of a beautiful reddiſh colour: the leaves are long, narrow, and arranged cloſely in form of pinnæ; the flowers are inconſiderable and yellowiſh; the fruit is a large, green ſeed, ſurrounded by a fine bright red calyx, ſucculent, and of the nature of a berry.

The yew is a native of moſt parts of Europe. C. Bauhine calls it, Taxus vulgaris.

EPHEDRA.

THE calyx of the amentum is divided into two parts; there is no corolla: the ſtamina are ſeven: four of the antheræ are inferior. The calyx of the female flower is quintuple, and divided into two parts; there is no corolla: the piſtils are two; the ſeeds are two, and are covered by a baccated calyx.

Ephedra caule nudo fruticoſo, floribus confertis. **The great Sea Grape.**
The naked, ſhrubby Ephedra, with cluſtered flowers.

The root is divaricated and ſpreading: the ſhrub grows to four, five, or ſix feet high; the ſtem is an inch or two in diameter; the branches are numerous, and the bark of a duſky blackiſh colour: the ſhoots that produce the flowers are a foot long, ſlender, and ſcarce ſupport themſelves erect: they are naked, or wholly without leaves, as is alſo the whole plant; but they are frequently jointed, and at the joints ſtand the flowers in cluſters; they are ſmall and moſſy: the fruit is red, ſucculent, and of an acid and auſtere taſte.

It is a native of the coaſts of Italy and Sicily. C. Bauhine calls it, Polygonum bacciferum maritimum majus.

The other ſpecies are, 1. The leſſer Sea-grape, or ſhrub Horſe-tail; and, 2. The climbing, bacciferous Ephedra, or climbing Sea Horſe-tail.

Claſs the Twenty Second. Order the Thirteenth.

DIOECIA SYNGENESIA.

RUSCUS.

THE calyx of the male flower is compoſed of ſix leaves; there is no corolla: the nectarium is ſituated in the center, and is of an oval figure, and perforated at the top. The calyx, corolla, and nectarium are in the female flowers exactly as in the male; the ſtyle is ſingle: the fruit is a berry, containing three cells; the ſeeds are two.

Ruſcus foliis ſupine floriferis nudis.
The Ruſcus, with naked leaves flowering on the upper part.

Butcher's Broom.

The root is creeping, white, and tender: the plant grows to two feet high; the ſtalk is tough, woody, firm, ſtriated, and ramoſe; the leaves are of an oblong ſhape, and pointed at the extremity ſo ſharply, as to prick the fingers; they are about half an inch long, and of a deep green colour: the flowers ſtand on the middle of the leaves, and are ſmall and greeniſh; the berry is large and red.

It is common in our woods and on heaths. C. Bauhine calls it, Ruſcus; others, Ruſcus vulgaris.

The other ſpecies are, 1. The Ruſcus, called the Alexandrian laurel, with the fruit on the leaf. 2. The Uvularia of the ſhops, or Hippogloſſum, with a little leaf on the larger. 3. The narrow-leaved Ruſcus, with the berries on the tops of the ſtalks.

Claſs the Twenty Second. Order the Fourteenth.

DIOECIA. GYNANDRIA.

CLUTIA.

THE calyx of the male flower is compoſed of five leaves; *the corolla is formed* of five petals. The calyx of the female flower is compoſed of five leaves, and the corolla of five petals: the ſtyles are three; the capſule contains three cells, and in each a ſingle ſeed.

Of this genus there is but one known ſpecies.

CLUTIA.

The root is brachiated and ſpreading: the ſhrub riſes to eight feet high; the ſtem or trunk is covered with a brown, unequal bark: the branches are numerous and ſlender; the leaves are of an oblong figure, obtuſe, and about an inch in length, fleſhy, and of a duſky green: the flowers are ſmall, and of a greeniſh white.

It is a native of Æthiopia.

Claſs the Twenty Third.

POLYGAMIA.

Plants which have hermaphrodite flowers, and others which are either ſimply male, or ſimply female.

OF theſe ſome have the ſeparate flowers on different parts of the ſame plant; others have them on two different plants, and others have the three kinds, and thoſe on three different plants, all of the ſame ſpecies.

The Polygamia may hence be conveniently arranged into three orders, according to theſe diſtinctions.

Claſs the Twenty Third. Order the Firſt.

POLYGAMIA MONOECIA.

Plants which have ſeparate hermaphrodite flowers, and either male or female ones, or different hermaphrodite ones, on the different parts of the ſame plant.

MUSA.

IN the male hermaphrodite flower, the calyx is a ſpatha: the corolla conſiſts of two petals, one of which is erect, and divided by five indentings at the edge, and the other

other is hollow, ſhorter, and nectariferous: the ſtamina are ſix; five of them are fertile, or have antheræ on them: the ſtyle is ſingle: the germen under the flower is abortive, or produces no fruit. In the female hermaphrodite flowers, the calyx, the corolla, the ſtamina, and the piſtil are the ſame in number, figure, and ſituation as in the others; but, of the ſix ſtamina, only one is fertile, or produces an anthera: theſe flowers are ſucceeded by the fruit, which is an oblong, triquetrous berry.

Muſa racemo ſimpliciſſimo. **The Plantain-tree.**
The ſimple-cluſtered Muſa.

The root is oblong and thick, blackiſh on the outſide, white within, and fibrated: the plant grows to ſix, eight, or more feet in height, and has the appearance of a tree: the ſtem is as thick as a man's leg, but it is tender, and may be cut through with one ſtroke of a knife; it is green, and ſeems compoſed of ſeveral ſeries of leaves, rolled over one another: the leaves grow from the top; they are eight or ten in number; theſe are each ſix or ſeven feet long, about a foot and a half broad, of a fine green colour, and of a firm and ſomewhat harſh texture, eaſily ſplitting, and cracking tranſverſely on each ſide to the middle rib: from the center of theſe leaves riſe the pedicles of the flowers; they are oblong, thick, and robuſt, and at their tops ſtands, at firſt, a large, oblong body, formed of a ſeries of broad and ſhort leaves; theſe daily expand, and then curl up, and, at length, ſhew the flowers they had incloſed, which are in each ſeven or eight in number, large, oblong, and of a whitiſh-yellow colour: the fruit is large, and of the ſize of a cucumber: there are a great many of theſe on the ſame pedicle, placed in ſeveral cluſters round it, at ſmall diſtances; they are of an oblong and triquetrous form: there are from ten to twenty of theſe fruits uſually on the whole pedicle, which lengthens and increaſes every way, as they appear ſucceſſively upon it: the fruit is eſculent.

It is a native of the Eaſt Indies. Cluſius calls it, Muſa; C. Bauhine, Palma humilis longis latiſque foliis, and Ficus Indica fructu racemoſo, folio oblongo.

The other ſpecies are, 1. The cluſter-fruited, racemous Muſa. 2. The ſmaller-fruited Muſa.

OPHIOXYLON.

IN the hermaphrodite flower, the calyx is divided into five ſegments: the corolla is alſo divided into five ſegments, and is of an infundibuliform ſhape: the ſtamina are five: the piſtil is ſingle. In the male flowers, the calyx is divided into two parts: the corolla is of an infundibuliform ſhape, and divided into five ſegments at the mouth: the nectarium is of a cylindric form: the ſtamina are only two.

Theſe characters ſufficiently diſtinguiſh the Ophioxylon, without a farther deſcription.

VERATRUM.

THE hermaphrodite flowers have no calyx: the corolla is formed of ſix petals: the ſtamina are ſix: the piſtils are three, and the fruit is compoſed of three capſules, each containing a great number of ſeeds. The male flowers have no calyx: the corolla is divided into ſix parts: the ſtamina are ſix in number, and there appears a rudiment of a piſtil.

Veratrum foliis latioribus. **White Hellebore.**
Broad-leaved Veratrum.

The root is compoſed of a cluſter of thick, whitiſh fibres: the plant riſes to three feet high: the ſtalk is round and robuſt: the leaves are numerous; they ſurround the ſtalk at the baſe, and are ten inches long, and eight broad, nervous, ſomewhat hairy, and ſoft to the touch: the flowers are ſmall, and of a greeniſh-white colour; they ſtand in cluſters, and form a kind of ſpike from the middle to the top of the plant.

It is a native of Germany, and many other parts of Europe. C. Bauhine calls it, Helleborus albus flore ſubviridi.

It's root dried is the white Hellebore of the ſhops, a powerful ſternutatory.

There is but one other known ſpecies, which is the early-flowering, narrow-leaved, purple Veratrum.

CELTIS.

THE calyx of the hermaphrodite flower is divided into five ſegments: there is no corolla: the ſtamina are five: the ſtyles are two: the fruit is a drupe, containing a ſingle kernel. The calyx of the male flower is divided into ſix parts: there is no corolla, and but one ſtamen.

Celtis foliis majoribus ſerratis.
The larger, ſerrated-leaved Celtis.

The Nettle-tree.

The root is brachiated: the tree grows to a conſiderable ſize: the trunk is thick: the branches numerous and diffuſe: the bark is of a greyiſh colour: the leaves are three or four inches long, and three fourths of their length in breadth near the baſe; they are ſomewhat like thoſe of the common ſtinging Nettle; they are deeply ſerrated, and terminate in a long, narrow point: the flowers are ſmall: the fruit is black, and of the bigneſs of a Cherry.

It is a native of Italy. C. Bauhine calls it, Lotus fructu ceraſi.

The other ſpecies are, 1. The Virginian, red-fruited Lotus. 2. The citron-leaved, American Lotus.

HOLCUS.

THE calyx of the hermaphrodite flower is a glume, containing two flowers: the corolla is a glume, furniſhed with a triple ariſta, or awn: the ſtamina are three; the ſtyles are two; the ſeed is ſingle. The calyx of the male flower is a bivalve glume: there is no corolla: the ſtamina are ſix.

Theſe characters ſufficiently diſtinguiſh the Holcus from all the graſs kind without a farther deſcription.

This genus comprehends the Sorghum of Micheli.

ÆGILOPS.

THE calyx of the hermaphrodite flower is a glume, containing three flowers: the corolla is a glume, terminated by a ſimple ariſta, or awn: the ſtamina are three; the ſtyles are two; and the ſeed is ſingle. The calyx of the male flowers is a glume, containing three flowers: the corolla is an ariſtated glume: the ſtamina are three.

Ægilops ſpica ovata, ariſtis breviore.
The Ægilops, with an oval ſpike ſhorter than the ariſtæ.

The root is compoſed of a few ſhort, white fibres: the plant grows to about a foot high: the ſtalk is round, hollow, jointed, and has two or three long, narrow, graſſy leaves on it, hairy at the edges: at the top of the ſtalk ſtands a ſhort ſpike, compoſed of two or three little rigid cluſters of flowers: the ſeeds are large, and ſomewhat like barley, but flatter: the ariſtæ are long, white, and acute.

It is a native of Italy, and ſome other parts of Europe. C. Bauhine calls it, Feſtuca altera capitulis duris; others, Ægilops.

The ſpike is ſometimes longer than uſual, in which ſtate Tournefort has mentioned it as another ſpecies, under the name of Gramen ſpicatum durioribus locuſtis ſpica longiſſima.

CENCHRUS.

THE involucrum is laciniated, echinated, and contains two flowers: the calyx is a glume, containing two flowers, the one of them male, the other hermaphrodite: the corolla of the hermaphrodite flower is a muricous glume: the ſtamina are three: the ſtyle is divided into two parts, and the ſeed is ſingle. In the male flower, the corolla is alſo a glume, without any awn: the ſtamina are three.

This genus comprehends the Paniſcaſtrella of Micheli.

Cenchrus panicula ſpicata. Rough-eared, ſea
The ſpiked-panicled Cenchrus. Dog's-graſs.

The root is compoſed of a great number of white fibres: the plant riſes to about ſix inches high: the ſtalks are numerous, hard, rigid, reddiſh, and full of knots, or joints: the leaves are numerous and ſhort; they cover the ſtalk, in great part, by ſurrounding it at their baſes; they are hairy at the edges, and of a bluiſh-green colour: the flowers form a kind of ſpike, of about an inch long, and muricated.

It is common about the ſea-coaſts, in many parts of Europe. C. Bauhine calls it, Gramen caninum maritimum ſpica echinata; but it is often found far from the ſea.

The other ſpecies are, 1. The long, purple-ſpiked, American Cenchrus. 2. The white-ſpiked, American Cenchrus. 3. The broader-leaved Cenchrus. 4. The tall, narrow-leaved Cenchrus.

VALANTIA.

IN the hermaphrodite flower, there is no calyx: the corolla is divided into four parts: the ſtamina are four: the ſtyle is bifid, and the ſeed is ſingle. In the male flower, there is no calyx: the corolla is divided into three or four ſegments: the ſtamina are either three or four: the piſtil is obſolete.

This genus comprehends the Cruciata of authors.

Valantia floribus maſculis quadrifidis, pedunculis diphyllis. Creſs-
The Valantia, with quadrifid male flowers, and diphyllous peduncles. Wort.

The root is compoſed of a cluſter of yellow fibres: the ſtalks are numerous, a foot long, and hairy, ſquare, infirm, and often in part procumbent: the leaves ſtand four at every joint; they are broad, ſhort, obtuſe, hairy, and diſpoſed in a radiated manner: the flowers are ſmall and yellow, and ſtand in the alæ of the leaves.

It is common under hedges, in many parts of England. C. Bauhine calls it, Cruciata hirſuta; others, Cruciata.

The other ſpecies are, 1. The four-leaved, echinated, ſaxatile Valantia. 2. The narrow and ſmooth-leaved Valantia. 3. The ſmall, broad-leaved, ſmooth, Alpine Valantia. 4. The paniculated-flowered Valantia. 5. The ſmooth, fine-leaved Valantia. 6. The hairy, round-leaved, Pyrenean Valantia. 7. The broad-leaved, ſmooth, white-flowered Valantia. 8. The narrower-leaved, white-flowered Valantia. 9. The little, procumbent, wall Valantia. 10. The rough-fruited Aparine of authors. 11. The ſmooth, broad-leaved, oriental Valantia.

PARIETARIA.

THE calyx of the hermaphrodite flower is divided into four ſegments: there is no corolla: the ſtamina are four: the ſtyle is ſingle; the ſeed is ſingle, and is contained in the calyx, which becomes elongated for it's reception. The calyx of the female flower is divided into four ſegments: there is no corolla: there are no ſtamina: the ſtyle is ſingle, and the ſeed is ſingle, and is contained in the ſame manner in the elongated cup.

Parietaria foliis lanceolato-ovatis alternis. Pellitory of
The Parietaria, with lanceolato-ovate, alternate leaves. the Wall.

The root is compoſed of a multitude of fibres, of a reddiſh colour: the ſtalks are numerous, round, hairy, browniſh, brittle, and not very thick; they grow to a foot, or more, in length: the leaves are oblong, broadeſt in the middle, and pointed at the ends, of a duſky green colour, and ſomewhat hairy: the flowers are ſmall and greeniſh; they ſtand in cluſters, at the alæ of the leaves.

It is common on old walls. C. Bauhine calls it, Parietaria officinarum et Dioſcoridis.

The other ſpecies are, 1. The baſil-leaved Parietaria. 2. The dwarf, Portugal Parietaria.

ATRIPLEX.

THE calyx of the hermaphrodite flower is formed of five leaves: there is no corolla: the ſtamina are five: the ſtyle is divided into two parts: the ſeed is ſingle and depreſſed. The calyx of the female flower is compoſed of two leaves: there is no corolla; there are no ſtamina: the ſtyle is divided into two parts: the ſeed is ſingle and compreſſed.

Atriplex valvulis fœmineis ſeminum diſco dentatis.
The Atriplex, with the female valves of the ſeeds dentated at the diſk.

Long-leaved Wild Orach.

The root is oblong, ſlender, and white: the ſtalk is round, ſtriated, green, and two feet high: the leaves ſtand alternately on it; they are three inches long, three quarters of an inch broad, and of a pale green colour, not ſerrated at the edges, but ſometimes ſagittated at the baſe: the flowers are of a greeniſh-white colour; they ſtand in long cluſters, at the tops of the branches.

It is common by way-ſides. C. Bauhine calls it, Atriplex anguſto oblongo folio.

It's leaves vary greatly in form. Sometimes they are not ſagittated at all at the baſe; ſometimes they are very much ſo; ſometimes they are very narrow, and at others broader, and ſometimes lanceolate, and not very long: all *theſe varieties will ſome*times take place, in ſome degree, on the ſame plant.

The other ſpecies of Atriplex are, 1. The garden Atriplex, diſtinguiſhed into the white and red kind by authors, as if of two ſpecies. 2. The broad-leaved, ſhrubby, ſea Atriplex. 3. The procumbent, Spaniſh, ſhrubby, ſea Atriplex. 4. The ſilvery, polygonum-leaved, ſea Atriplex. 5. The very narrow-leaved ſea Atriplex. 6. The laciniated-leaved, ſea Atriplex. 7. The narrow-leaved, dentated, ſea Atriplex. 8. The halimus-leaved, herbaceous, ſea Atriplex. 9. The deltoide-leaved, perennial, ſea Atriplex. 10. The oblong, narrow-leaved, ſea Atriplex. 11. The very narrow and very long-leaved Atriplex.

Claſs the Twenty Third. Order the Second.

POLYGAMIA DIOECIA.

Plants which have flowers of different ſtructure, hermaphrodites and others, on different plants of the ſame ſpecies.

CHAMÆROPS.

THE calyx of the hermaphrodite flower is divided into three parts: the corolla is alſo divided into three parts: the ſtamina are ſix: the germina are three: the fruit is compoſed of three drupes, each of which contains a ſingle kernel. The calyx of the male flower is divided into three parts: the corolla is divided alſo into three parts: the ſtamina are ſix, and cohere together.

Theſe characters ſufficiently diſtinguiſh the Chamærops, without a farther deſcription. Pontedera gives it the name of Chamæriphes, 10.

FRAXINUS.

IN the hermaphrodite flower, there is, in ſome ſpecies, no calyx; in others there is a ſmall one, divided into four parts: in ſome ſpecies there is no corolla, in others there is a ſmall one, formed of four petals: the ſtamina are two; the piſtil is ſingle, and the ſeed ſingle. In the female flower, the piſtil is ſingle, and the ſeed is ſingle, and, as in the other, of a lanceolated figure.

Fraxinus

22

Vallisneria

Asyris

Hippophae

Terebinthus

Mercurialis

Laurentia

Larica

Juniperus

Ruscus

Ephedra

Populus

23

Valantia

Veratrum

Celtis

Parietaria

Atriplex

Fraxinus

Empetrum

B. Cole Sculp.

Fraxinus floribus nudis.
The naked-flowered Fraxinus.

The common Aſh-tree.

The root is brachiated and ſpreading: the tree grows to a very conſiderable height and ſize: the bark of the branches is of a pale bluiſh-green colour: the leaves are large and pinnated; the pinnæ are of an oblong figure, and ſerrated: the flowers are ſmall and inconſiderable: the fruit is what we call the Aſhen-key; great cluſters of them are affixed to the ſame common pedicle.

It is common in our woods and hedges. C. Bauhine calls it, Fraxinus excelſior; others, Fraxinus vulgaris.

The other ſpecies are, 1. The complete-flowered Fraxinus, called the manna Aſh. 2. The rounder-leaved Fraxinus. 3. The narrower-leaved, American Fraxinus.

RHODIOLA.

THE calyx of the hermaphrodite flower is divided into four parts: the corolla conſiſts of four petals: the nectarium conſiſts alſo of four petals: the ſtamina are eight; the piſtils are four, and abortient. The calyx of the female flower is divided into eight parts: there is no corolla: the nectarium is compoſed of four petals: the piſtils are four: the capſules are alſo four, and each of them contains a number of ſeeds.

Theſe characters ſufficiently diſtinguiſh the Rhadiola, without a farther deſcription.

ANTHOSPERMUM.

THE calyx of the androgynous flower is divided into four ſegments: there is no corolla; the ſtamina are four; the piſtils are two, and the germen ſtands below the flower. The male flowers are the ſame with theſe, but that they want the piſtils and germen. The female flowers have the piſtils and germen, but they want the ſtamina. Theſe ſeveral flowers are ſometimes ſituated on the ſame plant, but more frequently on different ones of the ſame ſpecies.

Theſe characters ſufficiently diſtinguiſh the Anthoſpermum, without a farther deſcription. Pontedera gives this genus the name of Tournefortia.

ARETOPUS.

THE umbel of the male plant is compoſite: the involucra conſiſt of five leaves; the corolla of five petals: the ſtamina are five; the piſtils are two, and abortient. The umbel of the androgynous plant is ſimple: the involucrum is divided into four parts, and is very large, prickly, and contains a number of male flowers in the diſk, and four female ones in the radius. The male flowers have five petals and five ſtamina: the female flowers have five petals and two ſtyles: the fruit is ſingle and bilocular, and ſtands under the receptacle of the floſcule.

This genus comprehends the Valerianoides of Plukenet. It is ſufficiently diſtinguiſhed by theſe characters, without a farther deſcription.

Class the Twenty Third. Order the Third.

POLGAMIA TRIOECIA.

Plants which have distinct male, female, and hermaphrodite flowers, on as many separate plants of the same species.

EMPETRUM.

THE calyx of the hermaphrodite flower is divided into three parts: the corolla consists of three petals: the stamina are three, and very long: the stigmata are nine: the fruit is a berry, containing nine seeds. The calyx of the male flower is divided into three parts: the corolla is composed of three petals: the stamina are nine, and very long. The calyx of the female flower is divided into three parts: the corolla is composed of three petals: the stigmata are nine, and the fruit is a berry with nine seeds.

Empetrum procumbens foliis longioribus.
The procumbent Empetrum, with long leaves.

Berry-bearing Heath, or Crake Berries.

The root is oblong and spreading: the shrub is small, and in great part procumbent: the branches are woody, tough, and reddish: the leaves are numerous and small, narrow, firm, and of a deep green colour, and placed in a ternate, or quaternate, order: the flowers are small: the fruit is a round, black berry.

It is a native of most of the mountainous parts of Europe; we have it on the hills in Lancashire and Westmoreland. C. Bauhine calls it, Erica baccifera procumbens nigra.

There is but one other known species of this genus; this is the white-berried, erect Empetrum.

Some Genera, the Characters of which are not yet ſo perfectly known or aſcertained as were to be wiſhed.

PHOENIX.

THE male and female flowers are on diſtinct plants, or on the ſame ſpadix. In the male flowers, the general ſpatha is compoſite: the ſpadix is ramoſe: the corolla is deeply divided into three hollow, oval ſegments: the ſtamina are three ſlender filaments: the antheræ are ſhort. In the female flowers, the calyx is the ſame as in the male: the corolla is divided into three principal ſegments, with as many very ſmall laciniæ, externally and internally: the germen is roundiſh; the ſtyle is ſubulated and ſhort; the ſtigma is acute: the fruit is an oval berry, having only one cell, and in that a ſingle, oſſeous ſeed, of a ſuboval figure, with a longitudinal furrow.

Phœnix frondibus pinnatis, foliolis alternis enſiformibus, baſi complanatis, petiolis compreſſis dorſo rotundatis.

The pinnated-leaved Phœnix, with alternate, enſiform foliola, complanated at the baſe, and their pedicles compreſſed, and rounded at the back.

The great Palm, or Date-tree.

The root conſiſts of a long and thick body, penetrating deep into the earth, and of a multitude of ramifications, running juſt under the ſurface: the trunk is ſtrait, ſimple, and undivided: the tree grows to a conſiderable height: the leaves all grow in a kind of cluſter at the top; they are from ſixty to eighty in number, and are beautifully diſpoſed in a circular manner; in the midſt there ſtands a conic body, formed of a cluſter of yet unexpanded leaves; around this ſtand numbers of leaves, not yet perfectly ſeparated; below theſe, others more perfectly diſingaged, and ſo on to the loweſt; the whole head, formed by all theſe, is very large and very beautiful, the loweſt of them ſtanding not parallel, but making a kind of arch with their pedicles; they are very large, and pinnated; the pinnæ are very long, narrow, and of a deep green colour, reſembling in figure the leaves of reeds; and the rib appears ſpinoſe, but the ſpines are no other than the rudiments of leaves: the male ſpadix is large, ramoſe, and contains a vaſt number of flowers; they are ſmall, and of a yellowiſh-white colour: the female flowers are ſmall, and alſo very numerous; they are ſucceeded by the fruit, which is the Date of the ſhops.

It is a native of both the Eaſt and Weſt Indies. C. Bauhine calls it, Palma major; others, Palma dactylifera major.

CORYPHA.

THE general ſpatha is compoſite: the ſpadix is ramoſe: the corolla is divided into three oval, obtuſe, patent ſegments: the ſtamina are ſix ſubulated filaments, longer than the corolla: the antheræ are adnate: the germen is roundiſh: the ſtyle is ſubulated and ſhort: the ſtigma is ſimple: the fruit is a large, globoſe, unilocular berry: the ſeed is ſingle, oſſeous, large, and globoſe.

The Codda Panni of the Hortus Malabaricus is of this genus.

COCCUS.

THERE are male, hermaphrodite flowers, and female ones, diſtinct on the ſeveral parts of the ſame ſpadix: the general ſpatha is compoſite, and the ſpadix ramoſe. In the hermaphrodite flowers, the corolla is divided into three oval, acute ſegments: the ſtamina are ſix ſimple filaments, of the length of the corolla: the antheræ are oblong and incumbent: the germen is ſcarce viſible: the ſtyle is ſhort, thick, and

obtuſely trifid: the ſtigma is obſolete, and the rudiment of the fruit is abortient. The female flower has the corolla very minute, but divided alſo into three ſegments: the germen is oval, and terminates in a ſubulated ſtyle: the ſtigma is tripartite: the fruit is large, coriaceous, round, and obtuſely trigonal: the ſeed is a large nut, of an oval figure, acuminated, formed of three valves, obtuſely trigonal, and marked with three holes at the baſe.

This genus comprehends the Teuga of the Hortus Malabaricus.

BORASSUS.

THE male and female flowers are on diſtinct plants. The male flowers have the general ſpatha compoſite: the ſpadix is amentaceous and imbricated: the corolla is divided into three oval, hollow ſegments, reſembling petals: the ſtamina are ſix thick filaments: the antheræ are thick and ſtriated. The female flowers have the ſpatha and ſpadix like the male: the corolla is divided into three round, ſmall, permanent ſegments: the germen is roundiſh: the ſtyles are three, and ſmall: the ſtigmata are ſimple: the fruit is a roundiſh, obtuſe, rigid, unilocular berry: the ſeeds are three, oval, compreſſed, diſtinct, and filamentoſe.

This genus comprehends the Ampana and Carimpana of the Hortus Malabaricus: the Ampana is the male, the Carimpana the female.

CARYOTA.

THE male and female flowers are produced in ſeparate parts of the ſame ſpadix. The general ſpatha is compoſite: the ſpadix is ramoſe: the corolla is divided into three hollow, lanceolated ſegments: the ſtamina are numerous filaments, longer than the corolla: the antheræ are linear. The corolla in the female flower is divided into two very ſmall, acuminated ſegments: the germen is roundiſh: the ſtyle is acuminated: the ſtigma is ſimple: the fruit is a round berry, containing a ſingle cell: the ſeeds are two, large, oblong, rounded on one ſide, and flatted on the other.

BEGONIA.

THERE are diſtinct male and hermaphrodite flowers on the ſame plant. The male flower has no calyx: the corolla is formed of four petals, patent and regular; two of the petals are placed oppoſite, and are lanceolated; the other two are oval, emarginated, and broader: the ſtamina are numerous capillary filaments, ſhorter than the corolla: the antheræ are roundiſh: the piſtil is deciduous. The hermaphrodite flower has no calyx; the germen anſwers the purpoſe of one: the corolla is compoſed of five oblong, patent, and cordated petals: the ſtamina are numerous capillary filaments, ſhorter than the corolla: the antheræ are roundiſh: the germen is triangular, with membranaceous angles, and is three-pointed and erect: the ſtyles are three, bifid, and of the length of the ſtamina: the ſtigmata are globoſe: the fruit is triangular, and contains three cells: the ſeeds are numerous and ſmall.

Genera mentioned by Plumier.

THE corolla of the male flower is divided into ſix ſegments: the corolla of the female flower is alſo divided into ſix ſegments; there is no pericarpium: the calyx becomes large, round, and inflated, and it's rim is undivided: the ſeed is a nut of an oval figure, ſulcated, and containing only one cell: the ſeed is globoſe.

HIPPOMANES.

HIPPOMANES.

THE male and female flowers are produced distinct on the same plant. The male flower has no corolla: the fruit is a large, globose berry, somewhat umbilicated, and containing only one cell: the seed is round and woody.

This genus comprehends the Mancanella of Plumier.

CISSAMPELOS.

THE male and female flowers are produced separate on the same plant. The male flower consists of four oval, plane, patent petals: the fruit succeeding the female flower is a round berry, containing a single cell, and in it a single, rugose seed.

This genus comprehends the Coapeba and Clematis species 93. of Plumier.

PLUKNETIA.

THE male and female flowers are produced separately on the same plants. The male flower has no calyx: the corolla is composed of four oval, patent petals; the stamina form a short, pyramidal body. The female flower has no calyx; the corolla is the same as in the male: the germen is quadrangular; the style is filiform, and very long, and declinate: the stigma is peltated and quadrifid; the segments are obtuse and plane, and each is marked in it's middle with a spot.

The fruit is a depressed, quadrangular capsule; the angles carinated. It contains four cells, each of them bivalve: the seeds are single, roundish, compressed, and somewhat acuminated at one end.

HIPPOCRATEA.

THE calyx is a perianthium formed of a single leaf, patent, and lightly divided into five obtuse segments, larger than the corolla: the corolla is monopetalous, oval, truncated at the top, and undivided at the edges: the fruit is a capsule of a depresso-plane figure, patent, semitrifid, with trifid segments, and contains three cells, each of them bivalve; and the valves carinato-compressed: the seeds are oblong, and have a membranaceous ala.

This comprehends the Coa of Plumier; the parts seem ill described.

MATHIOLA.

THE calyx is an erect, cylindric, undivided perianthium, short and permanent: the corolla consists of a single, very long petal: the tube is slender, and gradually opens into a limb which is undivided, but it's edge is bent back: the stamina are five subulated filaments, shorter than the corolla: the antheræ are simple; the germen is globose, and stands under the receptacle: the style is filiform, and of the length of the corolla; the stigma is thick and obtuse: the fruit is a globose drupe, coronated with the cup, and unilocular: the seed is a globose nut; the kernel is globose.

ACHRAS.

THE calyx is a perianthium, composed of five leaves; they are oval, acuminated, erect, and permanent: the corolla is composed of five oblong, erect, and obversely cordated petals; the germen is oval: the fruit is an oval, quinquelocular berry: the seeds are single, suboval, compressed, smooth, and have a prominent denticle on one side.

This genus comprehends the Sapota of Plumier, who says, that the Sapota has the same characteristics as the Anona; but this deviates greatly from his more particular account of it.

BROSSÆA.

THE calyx is a perianthium, formed of a ſingle leaf, divided into five ſegments, which terminate in acute, erect points, of the length of the corolla: the corolla is formed of a ſingle petal; it is of a conic figure, the top truncated and undivided: the germen is pentacoccous; the ſtyle is ſubulated, and ſhorter than the corolla; the ſtigma is ſimple: the fruit is a round capſule, divided by five furrows; it contains five cells, and is covered with a large, fleſhy, ſucculent, connivent cup, which afterwards ſplits at the ſides: the ſeeds are numerous and ſmall.

DURANTA.

THE calyx is a perianthium, formed of a ſingle leaf, divided by five indentings at the extremity; it is erect, acute, permanent, and pregnant with the germen: the corolla is formed of a ſingle petal, and is of the ringent kind: the tube is cylindric and long; the limb is bilabiated: the upper lip is oval, erect, and hollow; the lower is divided into three parts: the lateral ſegments are roundiſh and patent; the lower is again divided into two roundiſh ſegments: the fruit is a roundiſh berry, covered with the cup; it's mouth is obliquely connivent, and it contains one cell: the ſeeds are four, and of an angular figure.

This genus comprehends the Caſtorea of Plumier.

HYMENÆA.

THE calyx is a perianthium, formed of a ſingle leaf, unequally divided by five indentings at the edge: the corolla is papilionaceous; the vexillum is large and reflex; the alæ are lanceolated and ſmall; the carina is ſubulated, longer than the alæ, and aſcendent: the germen is oblong; the fruit is a large legumen, of an ovato-oblong figure, obtuſe, and unilocular: the ſeeds are numerous, oval, and ſurrounded with fibres, and a farinaceous matter.

There is but one known ſpecies of this genus, which is deſcribed by Plumier, under the name of Cour baril.

XIMENIA.

THE calyx is a perianthium, compoſed of three leaves, ſmall, cordated in figure, and deciduous: the corolla is formed of a ſingle petal, of a campanulated figure, divided at the edge into three erect, oblong, obtuſe ſegments: the germen is ſmall, and of a ſuboval figure: the fruit is an oval drupe, containing one cell: the ſeed is oval, unilocular, and ſmooth.

FUCHSIA.

THE calyx is an undivided margin, coronating the germen: the corolla conſiſts of a ſingle petal: the tube is clavated; the limb is divided into eight ſegments, and plane; the ſegments are acuminated, and alternately lower: the ſtamina are four filaments, of the length of the tube: the antheræ are didymous and roundiſh: the germen is oval, and ſtands under the receptacle; the ſtyle is ſimple, and of the length of the ſtamina: the ſtigma is obtuſe: the fruit is a roundiſh berry, marked with four furrows, and containing four cells: the ſeeds are numerous, oval, and placed in a double ſeries.

THALIA.

THE calyx is an ovato-ſubulated, univalve ſpatha: the corolla conſiſts of five ovato-oblong petals, hollowed and undulated at the edge; the two which are neareſt the ſpatha are ſmall and involute, the others are nearly equal, erect, and concave: the germen is oval; the fruit is an oval, unilocular berry: the ſeed is ſingle, oſſeous, and bilocular: the nucleus is ſlender.

This is the Cortuſa of Plumier. It ſeems allied to the Monandria, the Canna, Maranta, and the reſt.

RHÆDEA.

THERE is no calyx: the corolla conſiſts of four vertically ovated petals; they are hollow and patent: the ſtamina are numerous; the germen is globoſe: the fruit is oval, ſmall, ſucculent, and contains only one cell: the ſeeds are three, of an ovato-oblong figure, large, and odly furrowed.

BUCEPHALON.

THERE is no calyx, nor any corolla: the fruit is an oval, but ſomewhat quadrangular, berry, containing one cell: the ſeed is brittle.

RANDIA.

THE corolla is monopetalous, and of the hypocrateriform kind: the limb is divided into five ſegments: the germen is oval; the ſtyle is ſimple: the fruit is an oval, unilocular capſule: the ſeeds are numerous, cartilaginous, compreſſed, and ſurrounded with pulp.

Houſton calls this Randia; Plukenet has figured it, under the name of a ſpecies of Jaſmine.

MYRISTICA.

THE male and female flowers are ſeparate. The calyx of the female is a perianthium, of an ovato-campanulated figure, and indented in four places at the edge; there is no corolla: the piſtil is of a clavated form, and of the length of the calyx: the fruit is a drupe, of a roundiſh figure: the ſeed is ſingle, of a roundiſh figure, lightly ſulcated, and ſurrounded with a compreſſed, reticulated matter.

This is all we know of the characters of the Nutmeg-tree; it were much to be wiſhed that ſome perſons of knowledge would examine them more carefully on the ſpot.

MYRISTICA. The Nutmeg-tree.

The root is brachiated and ſpreading: the trunk thick, and covered with a greyiſh bark: the tree grows to the ſize of one of our pear-trees: the leaves are ſomewhat like thoſe of the bay-tree, but larger, and terminated by a longer point; they have no pedicles, and are of a deep green on the upper ſide, and of a pale or whitiſh green below; they are very fragrant, when bruiſed: the flowers are yellowiſh; the fruit is ſomewhat like a peach.

It is a native of the Molucca's. The nutmeg is the ſeed of this fruit, and the mace ſurrounds it in a reticular manner.

ISCHÆMUM.

THE male and female flowers are ſeparate, but ſtand near one another. The male is very ſmall, and placed on the glume of the calyx of the female: the calyx of the male-flower is a bivalve, muticous glume, containing only one flower: the corolla is a bivalve, muticous glume, of the ſize of the proper cup: the ſtamina are three ſhort, capillary filaments: the antheræ are ſimple. The female flower is larger: it's calyx is a bivalve glume, contained within a common glume, with an intorted ariſta within one of the valves: the corolla is a ſmall, biflorous glume: the germen is oblong; the ſtyles are two, and reflex: the ſeed is ſingle, and involved in the calyces and corollæ.

Theſe are the characters of the Iſchæmum, or Schænanthus, as Scheukzer deſcribes it; but they are obſcure, and ſome of them improbable: this is one of the plants, in which there wants much nicer examination.

Of this genus there is but one known ſpecies.

ISCHÆMUM. Schœnanth.

The roots are ſmall, white, oblong, hard, woody, and fibrated: the radical leaves are numerous, four inches long, narrow, graſſy, convoluted, and terminate in a ſharp, robuſt point; theſe are of a pale green, and ſurround one another, and the ſtalk at the baſe: the ſtalk riſes to a foot high; it is round, jointed, but that at conſiderable diſtances, and is not hollow, but full of pith, like a ruſh: the flowers are of a reddiſh colour, and ſtand in a ſpiked form on the top of the ſtalk, arranged in two ſeries, in the manner of thoſe of darnel: the whole plant is of a fragrant, aromatic ſmell.

It is a native of Arabia. It has been in ſome eſteem in medicine as a cephalic and deobſtruent, but it is not much uſed at preſent.

FINIS.

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Utricularia — — 180
Utriculus terrata — 520
Uva — — 485

W

Wahlenbergia — — 542

X

Xanthium — — 603
Xeranthemoides — — 574
Xeranthemum — — 576
Ximenia — — 620
Xiphion — — 180
Xylaria — — 96
Xyris — — 96

Y

Yucca — — 382

Z

Zannichellia — — 603
Zannonia — — 625
Zea — — 589
Zinnia — — 148
Zizania — — 605
Zinziber — — 172
Zizyphora — — 592
Zizyphus — — 597
Zoftera — — 421
Zygophyllum — — 422